

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1
of Chelan County, Washington

Project No. 943-057
Washington

ORDER APPROVING FINAL REPORT ON GOSLING MORTALITY
AND AMENDING LICENSE

(Issued December 9, 1994)

On October 25, 1994, the Public Utility District No. 1 of Chelan County (licensee) filed the Final Report on Canada Goose Gosling Mortality in the Rock Island Dam Forebay, Columbia River, Washington 1990-1994. The final report was filed pursuant to article 406 of the license for the Rock Island Hydroelectric Project. The filing included additional protection measures and comments from the Washington Department of Fish and Wildlife (WDFW) and the U.S. Fish and Wildlife Service (FWS).

The filing reported the results from a five-year study on Canada goose (*Branta canadensis*) gosling mortality resulting from project operations. The project is required to spill water to improve downstream salmon and steelhead smolt migration. In 1991, the spill pattern was changed from 8:00 pm through 8:00 am to 8:00 pm through 6:00 am. This resulted in fewer gosling mortalities, since spills were eliminated between 6:00 am and 8:00 am—the period in which a large proportion of the goslings swim from the nesting islands.

As a result of the study, the licensee recommended that annual spill plans consider timing that provides for optimum gosling survival principally by minimizing spill between 6:00 am and noon from April 15 through May 5. The licensee was concerned that future spill criteria recommended by fisheries agencies and tribes may include spill timing that adversely affects gosling survival.

The WDFW and the FWS, in letters dated September 22, 1994 and October 20, 1994, respectively, concurred with the licensee's recommendations that gosling activities be accounted for in future spill criteria.

The Final Report on Canada Goose Gosling Mortality in the Rock Island Dam Forebay satisfies the requirements of Article 406. We agree with the licensee and agencies that the timing of future spills should consider impacts on gosling survival. Based on the study period, a small curtailment of early morning spillage between April 15 and May 5 can significantly reduce gosling mortality. While it appears that such modifications of spill can be accommodated, we recognize that the licensee is

required by Article 401¹ to follow the recommendations of the fishery agencies and tribes and that there may be occasions when spillage to improve downstream fish migration adversely affects gosling survival.

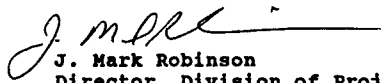
The recommended measures should protect Canada Goose goslings in the project area; this plan should be approved as modified below.

The Director orders:

(A) The Canada Goose gosling protection measures filed on October 25, 1994, pursuant to Article 406, as modified by paragraph (B), are approved.

(B) Annual spill plans shall consider timing that provides for optimum gosling survival principally by minimizing spill between 6:00 am and noon from April 15 through May 5. However, the licensee is required by Article 401 to follow future spill criteria recommended by fisheries agencies and tribes, although recommended spill timing may adversely affect gosling survival.

(C) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 CFR § 385.713.


J. Mark Robinson
Director, Division of Project
Compliance and Administration

¹ The licensee shall implement the fisheries protection measures outlined in Sections B through F of the settlement agreement filed with the Commission on May 4, 1987, according to the schedule outlined in the agreement.

DUPLICATE ORIGINAL

NEWMAN & HOLTZINGER, P.C.

ATTORNEYS AT LAW

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WASHINGTON, D.C. 20036-5610

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JAMES B VASILE
(202) 955-6654

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REGULATORY COMMISSION

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March 23, 1993

OFFICE OF ATTORNEY GENERAL
FISH & WILDLIFE DIV - OLYMPIA

Honorable Lois D. Cashell
Secretary
Federal Energy Regulatory Commission
825 N. Capitol Street, N.E.
Washington, D.C. 20426

Re: Public Utility District No. 1 of Chelan County,
Washington - Rock Island Project No. 943

Dear Ms. Cashell:

Enclosed for filing in the referenced docket is an "Agreement To Substitute Adult Fish Passage Studies For The Adult Mortality Studies In The Rock Island Project Settlement Agreement." This agreement represents unanimous consent by the parties to the Rock Island Settlement Agreement ("Settlement Agreement") for Chelan to participate in an adult fish passage study in lieu of the adult fish mortality study provision set forth at Subsection E.7(b) of the Settlement Agreement. The Settlement Agreement had been approved by the Commission as part of a comprehensive resolution of relicensing and fishery issues. Public Utility District No. 1 of Chelan County, Washington, 46 FERC ¶ 61,033 (1989).

The Settlement Agreement provides that the Rock Island Coordinating Committee "will be used as the primary means of consultation and coordination between Chelan and the Fishery Agencies and Tribes in connection with the conduct of studies and implementation of the measures set forth in this Agreement and for dispute resolution pursuant to subsection A.6." Settlement Agreement, Section G.2. The Committee, which is composed of one technical representative of each party to the Settlement Agreement, agrees that Chelan's participation in an adult passage study encompassing all five Mid-Columbia dams, as set forth in the study outline attached to the agreement, would likely provide valuable information, and that the adult mortality study called for in Subsection E.7(b) of the Settlement Agreement is technically infeasible.

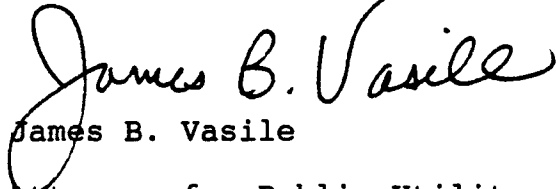
NEWMAN & HOLTZINGER, P.C.

Honorable Lois D. Cashell
March 23, 1993
Page 2

The parties agree that Chelan's obligations under Subsection E.7(b) would be fully satisfied and discharged upon Chelan's compliance with the obligations specified in the agreement submitted herewith, which require that Chelan participate in an adult fish passage study and compensate for losses due to unacceptable delays that cannot be reasonably eliminated.

Because this substitution of study requirements alters a provision in a Commission-approved Settlement Agreement, the parties request a Commission order approving this change. This substitution of study requirements will not change the project's facilities or operation. A copy of this letter and enclosure is also being sent to the Commission's Regional Office, and served on those who were parties to the Rock Island relicensing proceeding.

Respectfully submitted,

A handwritten signature in cursive script that reads "James B. Vasile". The signature is written in dark ink and is positioned above the printed name.

James B. Vasile

Attorney for Public Utility
District No. 1 of
Chelan County, Washington

Enclosure

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Public Utility District No. 1 of)	Project No. 943
Chelan County, Washington)	

**AGREEMENT TO SUBSTITUTE
FISH PASSAGE STUDIES FOR THE
ADULT MORTALITY STUDIES IN THE
ROCK ISLAND PROJECT SETTLEMENT AGREEMENT**

The parties to the Rock Island Project Settlement Agreement ("Settlement Agreement") dated April 24, 1987 and approved by the Federal Energy Regulatory Commission by order dated January 18, 1989 (Public Utility District No. 1 of Chelan County, Washington, 46 FERC ¶ 61,033), hereby unanimously agree to substitute adult fish passage studies and related requirements, as specified herein, for the adult fish mortality study and associated compensation requirement called for by Subsection E.7(b) of the Settlement Agreement.

Subsection E.7(b) of the Settlement Agreement requires an adult mortality study for the purpose of determining adult losses at the Rock Island Project, and provides that the adult losses so determined be converted to establish the required juvenile hatchery production necessary to compensate for such adult losses. Recently, the parties to the Rock Island Settlement Agreement and representatives of the two other Public Utility Districts that operate Mid-Columbia hydroelectric projects agreed to an outline of a study that would examine adult salmonid passage in 1993 throughout the entire area encompassed by the five

Mid-Columbia dams, including the Rock Island Project. Potential contractors to perform this study were sent a request for proposals ("RFP") on April 30, 1992.

The technical representatives on the Rock Island Coordinating Committee ("Committee") have agreed that the study of adult mortality at the Rock Island Project contemplated by Subsection E.7(b) of the Settlement Agreement is technically infeasible at this time and that a comprehensive adult passage study would provide valuable information about adult passage problems and give an indication of whether adult loss is occurring. Accordingly, the parties to the Settlement Agreement hereby agree that Chelan's obligations under Subsection E.7(b) of the Settlement Agreement will be replaced in full with the requirements in the following paragraph.

Chelan shall participate in and fund its share of the study of adult salmonid passage at Mid-Columbia Hydroelectric Projects as outlined in the April 30, 1992 RFP, a copy of which is attached as Appendix A to this agreement. If the results of the foregoing adult passage study demonstrate that there are not unacceptable delays and/or losses at the Rock Island Project, then Chelan's obligations under this paragraph shall be deemed satisfied and discharged in full following verification by a Committee approved adult passage study using sockeye and steelhead. However, if either study demonstrates that there are unacceptable delays and/or losses, Chelan will perform any necessary reasonable modifications to eliminate unacceptable delays and/or losses as verified through follow-up studies as approved by the Committee, including a study of adult passage of steelhead and

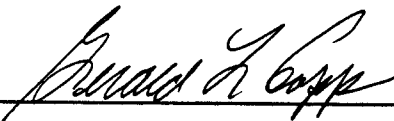
sockeye at the Rock Island Project. If unacceptable delays and/or losses are not eliminated through reasonable modifications, Chelan shall provide a level of hatchery compensation based upon the results of the foregoing adult passage studies and other available information. The determinations of whether there are unacceptable delays, and/or losses, whether reasonable modifications are available to eliminate unacceptable delays, and/or losses, and the appropriate level of compensation for unacceptable delays, and/or losses, that are not mitigated, shall be made by the Committee and shall be subject to the dispute resolution procedures in the Settlement Agreement. For the purpose of Subsection E.7(c) of the Settlement Agreement, any hatchery production required by this paragraph shall be considered to be an adjustment under Subsection E.7(b) of the Settlement Agreement.

Chelan agrees to file a copy of this agreement with the Commission and to request Commission approval of the change. Chelan will not be obligated to advance funds for the adult salmonid passage study until Commission approval of the change is obtained.

By affixing their signatures on the signature pages attached hereto, the undersigned are certifying that they are authorized to consent to this agreement on behalf of the party they represent.

Dated Oct 16 1992, 1992

PUBLIC UTILITY DISTRICT NO. 1 OF
CHELAN COUNTY, WASHINGTON

By 

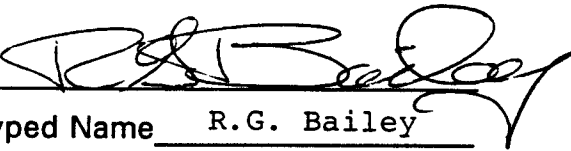
Typed Name Gerald L. Copp

Title Chief Executive Officer/General Manager

AGREEMENT TO SUBSTITUTE
FISH PASSAGE STUDIES FOR THE
ADULT MORTALITY STUDIES IN THE
ROCK ISLAND PROJECT SETTLEMENT AGREEMENT

Dated October 30, 1992

PUGET SOUND POWER & LIGHT COMPANY

By 
Typed Name R.G. Bailey

Title Vice President Power Systems

Dated 10/19, 1992

NATIONAL MARINE FISHERIES SERVICE,
in its own capacity and as
delegate for the United States
Department of Commerce

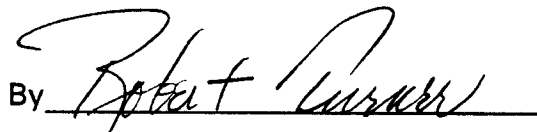
By 

Typed Name Rolland A. Schmitten

Title Regional Director

Dated November 10, , 1992

STATE OF WASHINGTON, acting by and
through the Washington Department
of Fisheries

By 
Typed Name Robert Turner
Title Acting Director

Dated October 30, 1992

STATE OF WASHINGTON, acting by and
through the Washington Department
of Wildlife


By Curt Smith

Typed Name Curt Smith

Title Director, WDW

Dated _____, 1992

STATE OF OREGON, acting by and
through the Oregon Department
of Fish and Wildlife

By  _____
Typed Name _____
Title _____

Dated December 3, 1992

CONFEDERATED TRIBES AND BANDS OF
THE YAKIMA INDIAN NATION

By Harry Smiskin

Typed Name Harry Smiskin

Title Vice-Chairman

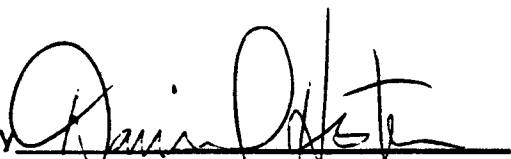
Dated March 11, 1993, 199~~2~~

**CONFEDERATED TRIBES OF THE COLVILLE
RESERVATION**

By E. Palmenteer Jr.
Typed Name Eddie Palmenteer Jr.
Title Chairman

Dated March 17, 19923

**CONFEDERATED TRIBES OF THE UMATILLA
INDIAN RESERVATION**

By 

Typed Name Daniel Hester

Title Tribal Attorney

Dated December 7, 1992

NATIONAL WILDLIFE FEDERATION

By *Peter M.K. Frost*
Typed Name Peter M.K. Frost
Title Attorney

Radio Telemetry Studies of Adult Salmonid Passage at Mid-Columbia Hydroelectric Projects

Study Outline

Description: The passage of spring and summer chinook salmon adults through the Mid-Columbia dams and reservoirs will be studied by radio tracking of tagged fish. The purposes of the study are to determine the length of time tagged fish take to pass each project and reservoir, the routes fish use to find fishway entrances, and to account for discrepancies in fish counts between dams. The study is expected to last at least two years, with the first year devoted to monitoring fish movements in response to the usual range of project and fishway operating conditions. Contingent on first year study results, the second year of study may include tests of fish passage under specific project or fishway operating conditions.

Objectives: Determine the date and time of arrival at each project's tailrace, entry into the fishway, arrival at intermediate points, and exit from the fishway. Determine the rates of fallout (number of times a fish may move in and out of fishway entrances before ascending and exiting the fishway) and fallback (fish that ascend and exit a fishway, only to return to the tailrace via the powerhouse or spillway). Determine the eventual fate (arrival at next project's tailrace, reservoir sighting or tributary turnoff) of tagged fish after passing or falling back over each project. Determine the proportion of fish using each fishway entrance (or group of entrances) at the projects.

Specified Equipment and Methodology: The radio tags and receiving equipment will be the Digitally Encoded Radio Telemetry System, manufactured by Lotek Engineering Inc. The tags will include motion sensors. Fish will be collected and tagged at John Day Dam. An adult fish trap will be provided apart from this contract. The number of spring and summer chinook tagged will be sufficient to ensure arrival of a minimum of 100 tagged fish of both runs combined at Wells Dam (average 5% of spring chinook and average 20% of summer chinook passing John Day Dam). Mobile surveys will be done to locate fish in reservoirs between Mid-Columbia dams once per week. Fixed antennas will be placed as needed to record fish arrival at the locations stated in the objectives.

Reporting Requirements: The contractor will prepare weekly summaries of tag detections at each hydroelectric project, including preliminary analysis to determine elapsed time between detection of fish in the tailrace and exit from fishway to forebay (mean, range and standard deviation), proportion of fish using each major entrance, incidence of multiple entry into lower fishway (fallout), incidence of fallback, and incidence of fish detected in fishway that are not detected exiting the fishway. A preliminary data report summarizing all Columbia River detections and tributary turnoff will be submitted by October 15. A draft annual report will be submitted by December 1.

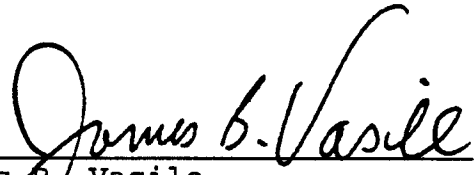
Outline of Specific Tasks

- I. Determine tag needs and logistics.
 - A. Determine number of fish to tag of each species and tag size. Procure tags.
 - B. Finalize trapping/tagging site with USCOE. Execute contract for use of trapping facilities.
 - C. Line up tagging equipment, personnel, support services, etc.
 - D. Execute the tagging program.
- II. Determine tag tracking needs and logistics.
 - A. For each dam, develop the fixed antenna array needed to track tagged fish movements in the project tailrace, at fishway entrances, within the fishway and exiting the fishway. Determine the number of receivers and data loggers needed for the antenna array.
 - B. For each reservoir and the reach below Priest Rapids Dam, determine the access route and equipment needed to pick up tagged fish location with mobile equipment once per week. Determine number and type of mobile units needed.
 - C. For each tributary and perhaps selected reservoir sites, develop the fixed antenna and receiver array needed. Determine the number of receivers and data loggers needed.
 - D. Procure receivers, data loggers, antennas, housings and power supplies, rental of motor vehicles, boats, and flight services. Install and test tracking equipment.
- III. Determine personnel needs.
 - A. Determine number of people needed on-site for maintenance of equipment, downloading of data, mobile survey work, and data organization and preliminary processing.
 - B. Determine the supervisory structure, data processing requirements, support staff, and people responsible for reporting the results.
 - C. Procure personnel, necessary office space and supplies. Execute the adult passage study and reporting.

CERTIFICATE OF SERVICE

I hereby certify that I have served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 23rd day of March, 1993.

A handwritten signature in cursive script, reading "James B. Vasile". The signature is written in dark ink and is positioned above a horizontal line.

James B. Vasile
Newman & Holtzinger, P.C.
1615 L Street, N.W.
Suite 1000
Washington, D.C. 20036
202/955-6654

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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Public Utility District No. 1
of Chelan County

Project No. 943-053
Washington

ORDER APPROVING MODIFICATION TO ADULT FISH MORTALITY STUDY
(Issued October 19, 1993)

On March 23, 1993, Public Utility District No. 1 of Chelan County, Washington (licensee) filed for Commission approval, an "Agreement to Substitute Adult Fish Passage Studies for the Adult Mortality Studies in the Rock Island Project Settlement Agreement" (Proposed Agreement). The Proposed Agreement is a request to change a fish study provision in the Rock Island Project Settlement Agreement (Settlement Agreement), dated April 24, 1987. The parties to the Settlement Agreement want to conduct adult fish passage studies rather than an adult fish mortality study required by subsection E.7(b).

Article 401 of the Order Approving Settlement Agreement issued January 18, 1989, requires the licensee to implement the fisheries protection measures outlined in sections B through F. Subsection E.7(b) of the Settlement Agreement requires an adult mortality study for the purpose of determining adult losses at the Rock Island Project. Any adult losses would be converted to establish the required juvenile hatchery production necessary to compensate for such adult losses.

All parties to the Settlement Agreement have agreed that the study of adult mortality at the Rock Island Project is technically infeasible at this time. Instead, they agreed that a comprehensive adult passage study throughout the mid-Columbia River would provide the necessary information on adult passage problems. They propose a radio telemetry study designed to investigate adult passage through all non-Federal projects from Priest Rapids through the Wells Project, including Rock Island Project.

The Proposed Agreement states that the licensee will participate in and fund its share of the adult passage study as described in appendix A. If the adult passage study results for spring and summer chinook salmon show no unacceptable delays and/or losses at the Rock Island Project, and the results of a subsequent adult passage study for sockeye salmon and steelhead show no unacceptable delays and/or losses, then the licensee's obligations under subsection E.7(b) of the Settlement Agreement will be satisfied. If either study show unacceptable delays and/or losses occur, licensee will perform any necessary reasonable modifications at the Rock Island Project to eliminate unacceptable delays and/or losses as verified by subsequent adult passage studies for spring and summer chinook salmon, sockeye

salmon, and steelhead. If unacceptable delays and/or losses are not eliminated by reasonable modifications, licensee will provide a level of hatchery compensation based upon the results of the adult passage studies and other available information.

The Rock Island Coordinating Committee (Committee) will determine if there are unacceptable delays and/or losses, if reasonable modifications are available to eliminate unacceptable delays and/or losses, and the appropriate level of compensation for unacceptable delays and/or losses that are not eliminated. The Committee's determinations will be subject to the dispute resolution process provision in the Settlement Agreement. For the purpose of subsection E.7(b) of the Settlement Agreement, any required hatchery compensation will be considered an adjustment under subsection E.7(b) of the Settlement Agreement.

We have reviewed the radio telemetry study proposal of adult salmonid passage at mid-Columbia hydroelectric projects and the Proposed Agreement. The Proposed Agreement and adult fish passage study satisfies Commission requirements and is consistent with section E.7(b) of the Settlement Agreement.

The Director orders:

(A) The "Agreement To Substitute Adult Fish Passage Studies For The Adult Mortality Studies In The Rock Island Settlement Agreement" filed March 23, 1993, by Public Utility District No. 1 of Chelan County, Washington, is approved.

(B) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, under 18 C.F.R. § 385.713.

Joseph A. Mezzan
J. Mark Robinson
Director, Division of Project
Compliance and Administration

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1
of Chelan County

Project No. 943-033
Washington

ORDER APPROVING CANADA GOOSE GOSLING MORTALITY STUDY PLAN
(Issued October 30, 1990)

The Public Utility District No. 1 of Chelan County, licensee for the Rock Island Hydroelectric Project, FERC No. 943, filed a plan to monitor the degree of mortality of Canada goose goslings from operation of the project, as required by article 406 of the license.


The licensee proposes to monitor gosling activity in the forebay of the Rock Island Reservoir from April 15 through May 5 and record a variety of data on Canada goose broods, climatic conditions, and project operation. Monitoring activities will be conducted for a 5-year period from 1990 through 1994. Annual reports will be completed by July 30 each year. A final report of the study results, recommendations for any measures necessary to protect and enhance the Canada goose population, and comments of the U.S. Fish and Wildlife Service (FWS) and Washington Department of Wildlife (WDW) on the study results will be filed with the Commission by October 30, 1994.

The FWS and WDW generally concur with the plan. The information obtained from implementation of the plan will indicate the extent of Canada goose gosling mortality and the factors affecting mortality. These data will provide the basis for development of measures to protect and enhance the Canada goose population at the Rock Island Project, if necessary.

The Director orders:

(A) The Canada goose gosling mortality study plan filed on January 8, 1990, is approved.

(B) This order is issued under authority delegated to the Director pursuant to section 375.314 of the Commission's regulations. Section 385.1902 of the Commission's regulations provides 30 days from the date of this order for an appeal to the Commission of this action. Filing an appeal does not stay the effective date of this order or any date specified herein.


J. Mark Robinson
Director, Division of Project
Compliance and Administration

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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Public Utility District No. 1
of Chelan County

Project No. 943-034
Washington

ORDER APPROVING WOOD DUCK NEST BOX USE MONITORING PLAN

(Issued October 30, 1990)

The Public Utility District No. 1 of Chelan County, licensee for the Rock Island Hydroelectric Project, FERC No. 943, filed a plan to monitor wood duck nest box use, as required by article 407 of the license.


The licensee proposes to monitor the use of 60 existing wood duck boxes along the Rock Island Reservoir during 1990 and 1991. Data collection will include species of duck nesting, number of nests attempted, number of eggs laid, and hatching success of each nest attempt. The causes of unsuccessful nest attempts or unhatched eggs, and the characteristics of occupied and unoccupied nest boxes will also be evaluated. Results of the 1990 and 1991 studies will be reported to the U.S. Fish and Wildlife Service (FWS) and the Washington Department of Wildlife (WDW). A final report containing the data for the 1990 and 1991 studies, and data collected for the seven years previous to 1990, will be filed with the Commission by December 1, 1991. The final report will also contain recommendations, if necessary, to protect and enhance the wood duck population of the project area, and comments from the FWS and WDW on the results of monitoring and any recommendations.

The FWS and WDW generally concur with the plan. The information obtained from implementation of the plan will indicate wood duck nesting use and success. These data will provide the basis for development of measures to protect and enhance the wood duck population at the Rock Island Project, if necessary.

The Director orders:

(A) The wood duck nest box use monitoring plan filed on January 8, 1990, is approved.

(B) This order is issued under authority delegated to the Director pursuant to section 375.314 of the Commission's regulations. Section 385.1902 of the Commission's regulations provides 30 days from the date of this order for an appeal to the Commission of this action. Filing an appeal does not stay the effective date of this order or any date specified herein.


J. Mark Robinson
Director, Division of Project
Compliance and Administration

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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Public Utility District No. 1
of Chelan County

Project No. 943-029
Washington

Commission of this action. Filing an appeal does not stay the effective date of this order or any date specified herein.

ORDER APPROVING BALD EAGLE MONITORING PLAN

(Issued September 5, 1990)

The Public Utility District No. 1 of Chelan County, licensee for the Rock Island Hydroelectric Project, FERC No. 943, filed a plan to monitor the effect of recreational use of project lands and waters on bald eagles as required by article 405 of the license.

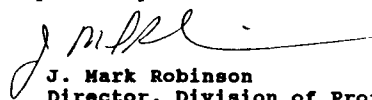
The licensee proposes to monitor the disturbance effect of recreational activities on bald eagles on the Rock Island Reservoir on a weekly basis from November 15 through March 15, an 18-week period, during 1989-90, 1990-91, and 1991-92. A variety of data on bald eagle use and human recreational use will be collected and used to describe the effects on bald eagles that result from hiking, boating, and fishing at the project. The licensee proposes to submit a report to the Washington Department of Wildlife (WDW) and the U.S. Fish and Wildlife Service (FWS) on the results of monitoring during 1989-90 and 1990-91 by July 1, 1990 and 1991, respectively. A report on the 1991-92 monitoring will be provided to WDW and FWS by September 1, 1992. Further, by December 15, 1992, the licensee will file with the Commission a final report containing the results of the three years of monitoring, recommendations, and wildlife agency comments.

The WDW and FWS generally concur with the plan. The information obtained from implementation of the plan should indicate whether or not recreational use on Rock Island Reservoir is having an effect on bald eagles.

The Director orders:

(A) The bald eagle monitoring plan filed on December 13, 1989, is approved.

(B) This order is issued under authority delegated to the Director pursuant to section 375.314 of the Commission's regulations. Section 385.1902 of the Commission's regulations provides 30 days from the date of this order for an appeal to the


J. Mark Robinson
Director, Division of Project
Compliance and Administration

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FEDERAL ENERGY REGULATORY COMMISSION

Public Utility District No. 1
of Chelan County, Washington

Project No. 943-028
Washington

ORDER APPROVING WILDLIFE MANAGEMENT PLAN
WITH MODIFICATION

(Issued December 8, 1989)

On September 5, 1989, Public Utility District No. 1 of Chelan County, Washington, licensee for the Rock Island Hydroelectric Project, filed a wildlife management plan (plan) as required by article 403 of the license. Article 403 specifically requires that a plan be developed for an approximately 1,000-acre tract of off-site lands owned by the licensee and referred to as the Water District lands. The primary purpose of the plan is to provide additional riparian habitat in the general vicinity of the project to compensate for riparian habitat lost at the Rock Island Project.

The licensee proposes to include in its plan the Water District lands and a second area, the Swakane fire area. The Swakane fire area, a 7,011-acre area under the jurisdiction of the Washington Department of Wildlife (WDW), is part of a 58,176-acre area burned by a major wildfire in the late summer of 1988. Most of this area is important wildlife habitat. The WDW places a high priority on rehabilitating the Swakane fire area, but lacks funds to address the majority of wildlife habitat needs within the area. The Swakane fire area is similar to the Water District lands in elevation and proximity to the Columbia River, but offers greater opportunity for riparian habitat development. The Water District lands lie within 1 mile northwest of Wenatchee; the Swakane fire area lies 4 to 8 miles north of Wenatchee.

In its plan, the licensee generally proposes to preserve the existing wildlife values of the Water District lands and implement wildlife development and enhancement measures on the Swakane fire area. The Water District lands will be designated and maintained as a wildlife habitat preserve for the term of the Rock Island license, and up to \$50,000 will be funded annually for a 3-year period to develop and enhance riparian habitat in the Swakane fire area. Habitat development and enhancement in the Swakane fire area will include: (1) planting riparian vegetation on about 250 acres of non-irrigated canyon and draw bottomlands; (2) developing about 21 acres of riparian habitat in irrigated fields; (3) establishing a 2-mile trickle irrigation system and planting it with riparian trees and shrubs;

-2-

(4) enhancing 10 natural springs; and (5) installing 10 water guzzlers for wildlife. The plan will be implemented through the direction of an interagency advisory group of biologists representing the U.S. Fish and Wildlife Service (FWS), WDW, and the licensee.

The plan will be implemented during three consecutive years beginning in 1990. Plantings for the first two years will be monitored during the third year to assess survival. Replanting will be conducted as appropriate to replace mortality and increase plant diversity. The licensee proposes to provide the FWS, WDW, and the Commission with annual progress reports that present the completed habitat work and address the goals of the plan and the work scheduled for the following year. The licensee, however, has not specified the dates to file its reports. Therefore, specific reporting dates will be required.


The FWS and WDW strongly support the proposed plan. Implementation of the plan would provide adequate mitigation for riparian habitat losses at the Rock Island Project.

The Director orders:

(A) The wildlife management plan filed on September 5, 1989, as modified by paragraph (B), is approved.

(B) The licensee shall file with the Commission annual progress reports on implementation of the wildlife management plan. Each report shall contain documentation of completed habitat work, an evaluation of the goals of the plan, recommendations for any revisions to the plan, a schedule for work to be conducted the following year, and comments from the U.S. Fish and Wildlife Service and the Washington Department of Wildlife on the annual report. Reports shall be filed by December 31 from 1990 through 1994. The Commission reserves the right to require modifications to the plan and the reporting requirements.

(C) This order is issued under authority delegated to the Director and is final unless appealed to the Commission under Rule 1902 within 30 days from the date of this order.


J. Mark Robinson
Director, Division of Project
Compliance and Administration

-2-

Administration's (BPA) transmission grid, and the Puget Sound Power and Light Company's (Puget) distribution system. 2/

The Commission issued the initial license for the project in 1930, 3/ and the project was completed in 1933. In 1974 the Commission approved an amendment of the license to construct a second powerhouse containing eight 51.3 MW tube-type generating units and to modify the existing dam to permit the reservoir to be raised 6.1 feet. 4/ No significant changes to the project have occurred since that time.

The Rock Island Project consists of: (1) a 135-foot high and 2,524-foot long concrete gravity dam; (2) a 1,800-acre and 20-mile long reservoir, providing 130,000 acre-feet of gross storage; (3) the left bank powerhouse having a total installed capacity of 212.1 MW; (4) the right bank powerhouse having a total installed capacity of 410.4 MW; (5) six 115-kV transmission lines; and (6) appurtenant facilities. A more detailed project description is contained in ordering paragraph (B).

History of this Proceeding

On January 18, 1977, the licensee filed, pursuant to the Federal Power Act (FPA), an application for a new license for the Rock Island Project. 5/ Public notice of the application was published, and comments were received from interested federal, state, and local agencies and other entities and individuals. The Washington State Department of Fisheries (WDF), Washington State Department of Game (WDG), and the National Marine Fisheries Service (NMFS) were granted intervention.

On December 4 and 26, 1978, these agencies, together with the Oregon Department of Fish and Wildlife and the Confederated Tribes and Bands of the Yakima Indian Nation (Tribes), filed petitions asking the Commission to modify the operation of the Rock Island

2/ Under a long-term contract the licensee sells much of the power produced by the Rock Island Project to Puget for use within Puget's service area in King County, Washington.

3/ Tenth Annual Report of the Federal Power Commission 229
(1930).

4/ 51 F.P.C. 1141 (1974).

5/ The Washington Department of Ecology issued water quality certification for the project in accordance with Section 401(a) of the Federal Water Pollution Control Act, 33 U.S.C. § 1341(a).

Project as well as the other licensed projects on the mid-Columbia River, or in the alternative to institute a proceeding to consider their requests. The petitioners claimed that commercial, Indian, and sport fisheries had suffered severe losses over the years due to the construction and operation of these projects. They sought certain minimum flows and spills and other modifications to the projects to protect juvenile salmon migrating downstream each spring.

On March 7, 1979, the Commission consolidated the petitions with a complaint filed by Washington Department of Fisheries involving Priest Rapids Dam and set the entire matter for hearing. ^{6/} ^{7/} The parties reached first a one-year interim settlement governing fish protection measures at all five dams and then a five-year interim settlement through 1984. The interim agreement provided for spill, hatchery compensation, and studies to improve fish protection and was approved by the Commission on March 20, 1980. ^{8/}

On May 13, 1981, the Director, Office of Electric Power Regulation (Director), issued a new license to the PUD for the Rock Island Project. ^{9/} The Director deferred action on the intervenors' requested fish and wildlife mitigation measures pending their resolution in the above-referenced hearing process. He also required the licensee to submit a revised Exhibit S, Fish and Wildlife Report, based on pre- and post-flooding studies being conducted at the project as a result of the prior approval of the new powerhouse and raising of the reservoir. ^{10/} The Commission denied appeals ^{11/} and requests for rehearing ^{12/} of the order issuing the license.

^{6/} 6 FERC ¶ 61,210 (1979).

^{7/} See P.U.D. No. 1 of Grant County, Washington, 45 FERC ¶ 61,401 (1988), regarding the conclusion of the complaint phase of the consolidated proceeding.

^{8/} 10 FERC ¶ 61,257 (1980).

^{9/} 14 FERC ¶ 62,187 (1981).

^{10/} See note 4, supra. The licensee filed the Exhibit S on May 29, 1984.

^{11/} 19 FERC ¶ 61,223 (1982).

^{12/} 21 FERC ¶ 61,264 (1982).

The Secretary of Commerce, on behalf of NMFS, and the Tribes filed petitions for review of the relicensing orders in the Ninth Circuit Court of Appeals. On June 7, 1984, the court granted the petitions and set aside the Commission orders. ^{13/} The court held, inter alia, that the Commission may not defer consideration of a project's impacts on the fishery resources, and possible mitigation thereof, until after a license is issued. Instead, the Commission must evaluate the impacts and decide upon proper mitigation measures before issuing the license. ^{14/} The court also required that an environmental impact statement be prepared on the relicensing of the Rock Island Project. On April 4, 1985, after the Supreme Court denied the licensee's petition for certiorari, the Commission issued an annual license for Project No. 943, to be renewed until such time as the relicensing proceeding is completed.

During the pendency of judicial review, the 5-year interim settlement neared expiration, and the parties negotiated and filed on March 29, 1985, a stipulation outlining another interim program of studies and fisheries protection measures for 1985 through 1987. The stipulation included all mid-Columbia projects except Rock Island and was accepted by the presiding administrative law judge. ^{15/} Following a pre-hearing conference in Seattle, Washington, concerning Rock Island, the presiding administrative law judge accepted, over the objection of the fishery agencies and Tribes, the PUD's proposal for operating in the spring of 1985.

A hearing was held to determine the licensee's responsibilities for 1986 and 1987 with respect to Project No. 943. Active participants in the hearing were the PUD, Puget, NMFS, WDF, WDG, the Tribes, the National Wildlife Federation (NWF), ^{16/} and the Commission staff. The Northwest Power Planning Council (Council) also was represented at the hearing and filed a brief with the presiding judge. ^{17/}

^{13/} See Yakima, supra.

^{14/} Id. at 472-73.

^{15/} See 34 FERC ¶ 63,044 (1986) at p. 65,165.

^{16/} NWF filed a motion to intervene in the proceeding on November 29, 1984, which was granted on January 10, 1985.

^{17/} The Council filed a motion for limited intervention on February 4, 1983, which was granted at a prehearing conference on February 15, 1983.

An initial decision with regard to Project No. 943 was issued on January 31, 1986. 18/ The presiding judge made certain findings of fact and conclusions of law with respect to project impacts, interim protection measures, and additional studies to be conducted to evaluate long-term fisheries protection and compensation measures. Exceptions to the initial decision were filed and remain pending before the Commission. 19/ During the pendency of the appeal of the exceptions to the initial decision, the licensee agreed to provide interim spill protection for downstream migrants and to initiate a logical sequence of studies of mechanical bypass systems at the project in accordance with the initial decision. A mid-Columbia Coordination Committee (MCCC) continued to function to administer the stipulation and interim programs. 20/

After these hearings were concluded, the parties continued negotiations on a potential long-term settlement agreement for the Rock Island Project. The instant agreement was finally reached on January 26, 1987, circulated for signatures, and filed on May 4, 1987. Commission staff filed comments in support of the settlement agreement on May 26, 1987. The U.S. Department of the Interior, Bureau of Indian Affairs, by letter dated May 14, 1987, concluded that the settlement agreement does not require approval of the Secretary of the Interior under 25 U.S.C. § 81. 21/ On May 26, 1987, the Council commented in support of the settlement agreement and invited the parties to submit to the Council an application to amend the Columbia River Basin Fish and Wildlife Program 22/ in order to reconcile the minor differences between them. 23/ On June 3, 1987, the presiding administrative law judge certified the

18/ 34 FERC ¶ 63,044 (1985).

19/ As noted, the settlement under consideration would resolve these issues.

20/ The MCCC consists of representatives of the licensee, power purchasers, fisheries agencies, and Indian Tribes.

21/ This section of the United States Code regulates contracts with Indian Tribes or Indians and provides certain limitations that apply to the execution of such contracts or other agreements

22/ See 16 U.S.C. § 839b(h) (1982).

23/ The Council subsequently amended the Program to incorporate the settlement agreement. See 52 Fed. Reg. 32981 (September 1, 1987).

uncontested offer of settlement to the Commission pursuant to Rule 602 of the Commission's Rules of Practice and Procedure. 24/

The Settlement Agreement

Unlike prior agreements in this proceeding, the instant agreement provides a comprehensive and long-term resolution of the anadromous fish issues at the Rock Island Project. The agreement would be the basis for issuance of a new license and termination of the mid-Columbia Proceeding (Docket No. E-9569, et al.) for this project. The term of the agreement commenced on the date of execution by all parties thereto and runs until the expiration of the new license to be issued in the remanded proceeding, plus the term of any annual license which may be issued thereafter. (Section A.3.)

The agreement establishes licensee obligations with respect to juvenile downstream migrant bypass facilities, juvenile fish passage through spill, hatchery compensation for fish losses, and fish ladder operation for the first thirteen years of the term of the agreement. (Section A.1.) Thereafter, any party may initiate negotiations or file a petition to modify the terms and conditions or to replace the agreement in whole or in part. (Section A.4.) The parties have also agreed to continue to implement the agreement until the modification or other relief sought becomes effective by operation of law. (Section A.5.b.) Accordingly, in the absence of any such negotiation or petition for modification, the agreement will remain in effect for the term of the new license and any annual license which may be issued thereafter.

The agreement includes a dispute resolution mechanism concerning compliance. (Section A.6.) The parties would first attempt to solve any problems under the agreement by referral to the Rock Island Coordinating Committee (Committee). 25/ If the Committee cannot resolve the dispute and if the amount in controversy is \$325,000 or more, the dispute may be referred to the Commission pursuant to its Rules of Practice and Procedure. If the Committee cannot resolve the dispute and if the amount in controversy is less than \$325,000, any party may request expedited review, which would entail asking the Commission to refer the matter to the presiding administrative law judge in the mid-

24/ 18 C.F.R. § 385.602 (1988).

25/ The Committee is composed of one technical representative of each party to the agreement. Besides dispute resolution, the Committee will be used as the primary means of consultation and coordination between the licensee and the fishery agencies and Tribes. (Section G.)

Columbia proceeding or referring the matter to a third party. Any decision by the judge or a third party would be effective upon issuance and subject to de novo Commission review. 26/

The settlement agreement provides for the licensee to carry out measures at the project which are designed to provide adequate protection and full compensation for project-induced losses to the fishery at least through the end of the thirteen-year initial period. The following is a summary of the licensee's obligations.

The PUD has agreed to fund and carry out a research and development program at each powerhouse to develop a workable mechanical juvenile bypass system 27/ that will safely guide the migrating juvenile salmon and steelhead around the turbines. The current schedule provides for a design by 1991 for powerhouse No. 1 and by 1992 for powerhouse No. 2. If the design, as shown by a prototype, successfully guides at least fifty percent (50%) of the fish around the dam, the PUD will be obligated to build and install a complete bypass system for that powerhouse (within specific limitations of cost, safety, and loss of generating capacity). Once installed, the licensee will maintain and operate the system. The capital cost estimate for installation of the bypass system (exclusive of modeling, prototypes, and testing) is \$17.9 million at powerhouse No. 1 and \$7.7 million at powerhouse No. 2 (both in 1986 dollars). (Section B.)

As an interim fish protection measure, the licensee will spill a specified percentage of the daily average flow in the spring, extending over eighty percent of the migration period. The percentage of water spilled in the spring will be reduced when the new hatchery specified in the agreement is completed. In addition, the licensee will conduct a summer spill evaluation in 1987 and will implement a summer spill program in 1988 if certain effectiveness criteria are met. If a bypass system is installed at both powerhouses, all spill will stop. If the Fishery Conservation Account specified in the agreement is established, then all subsequent spill must be purchased by the fishery agencies and Tribes using the credit made available through the account. (Section D.)

An annual credit known as the "Fisheries Conservation Account" will be established either at the request of the fishery agencies and Tribes or following installation of a bypass system at one but

26/ We discuss this process further, infra, at pp. 10-11.

27/ A bypass system is a system for deflection, collection and routing of juvenile salmonids past operating powerhouse generating units.

not the other of the powerhouses, whichever occurs first. Upon establishment of the account, the licensee's obligation to fund and carry out the bypass research and development program under Section B of the agreement, and to provide spill, stops. All further bypass development studies and spill must be paid for out of the account. If no bypass systems are installed when the account is established, the annual account credit is \$ 1,000,000 (1986 dollars). If a bypass system is installed at the second powerhouse only, the account credit is \$600,000 (1986 dollars). The account will continue until either the agreement is modified or bypass systems are installed at both powerhouses. (Section C.)

The licensee will build a central hatchery facility and satellite facilities capable of rearing 250,000 pounds of salmon and 30,000 pounds of steelhead annually. The central facility will be located on the licensee's property adjacent to the east bank of Rocky Reach Dam and within the project boundary for Project No. 2145. The satellite facilities for outplanting the yearlings will be located on the Wenatchee, Methow, and Okanogan River systems. Subject to interim Commission approval, the hatchery design and construction will take place during 1987 and 1988. 28/ Consistent with the Supplement Agreement between the fishery agencies and Tribes, WDF and WDG will operate the hatchery facilities, and the licensee will pay the operation and maintenance expenses. The agreement also provides that hatchery compensation will be adjusted to reflect the results of project-related mortality studies, and also to account for increases in the run size in the future. (Section E.)

The licensee agrees to spend up to \$650,000 (1986 dollars) to modify the existing adult fish ladders on the right and left banks at the Rock Island Project and to provide extra water if necessary to bring them into compliance with fishery agency operating criteria. 29/

The fishery agencies and the Tribes agree to support the expeditious issuance of a new 40-year license to the PUD for the Rock Island Project, incorporating the settlement agreement as a special article thereof. The fishery agencies and the Tribes agree to waive all claims to any additional measures or compensation from the date of the commencement of the mid-Columbia Proceeding (March 7, 1979) to the year 2000. The fishery agencies and the Tribes also agree not to seek or support any additional or different measures at Rock Island until the year 2000. In addition, the fishery agencies and the Tribes have stipulated that the

28/ See 39 FERC ¶ 62,258 (1987).

29/ See 42 FERC ¶ 62,082 (1988).

performance of the licensee's obligations under the agreement will constitute compliance with the Northwest Power Planning Council's 1984 Fish and Wildlife Program, adequate fish protection, and full compensation for all losses caused by the project until the year 2000. ^{30/} The parties agree to the termination of the Mid-Columbia proceeding insofar as it pertains to the Rock Island Project. The fisheries agencies and the Tribes further agree to refrain from requesting any additional measures pertaining to fishery issues until the expiration of the thirteen-year initial period. (Section H.)

As discussed in more detail below, the staff determined in its final environmental impact statement (EIS) that the proposed settlement agreement would probably allow full compensation for present and future smolt mortality at the Rock Island Project. The settlement agreement will therefore resolve, with respect to the Rock Island Project, the issues set for hearing in 1979 as a result of the pleadings filed by the resource agencies in this docket and in Docket No. E-9569. ^{31/}

Because of its connection to the relicensing of the project and the need to prepare an EIS thereon pursuant to the Yakima decision, this settlement agreement has undergone unusual public scrutiny since it was filed with the Commission on May 4, 1987. Not only is it the result of many years of discussions, studies, tests, hearings, and negotiations, but it has also been available in the public arena for thorough evaluation for nearly two

^{30/} Section A.9 of the settlement agreement expressly supersedes certain anadromous fish measures which the licensee had proposed in the Exhibit S filed with the Commission on May 29, 1984. The anadromous fish measures which are not expressly superseded by the agreement and the resident fish and wildlife measures set forth in the Exhibit S continue to form a part of the fish and wildlife program which the licensee considers appropriate to support the relicensing of the project.

^{31/} Still to be resolved are fish passage issues at Project Nos. 2114, 2145, and 2149. Negotiations are continuing among the parties for long-term agreements at these projects, and meanwhile they operate under renewable annual stipulations approved by the presiding administrative law judge.

years. ^{32/} During this time, no problem or opposition to it has surfaced.

We believe the settlement agreement is in the public interest, and we will adopt it. It properly balances the continued operation of the project and its generation of low-cost electric power with a effective, long-term program for protection, mitigation, and enhancement of the fish and wildlife resources affected by the project. Together with staff's recommended mitigation measures for recreation, archeological, and historic resources, the settlement agreement appears to provide for an optimum utilization of the water resources of the Columbia River and project environs.

However, one aspect of the settlement does require clarification. As noted, Section A.6 of the agreement provides that, if the Rock Island Coordinating Committee cannot resolve a dispute among the signatories and if the amount in controversy is under \$325,000, then any party may request the Commission to refer the dispute to the presiding administrative law judge in the mid-Columbia Proceeding, Docket No. E-9569, for expedited review. As we noted in the order approving a settlement agreement among many of these same parties with a similar dispute resolution mechanism, ^{33/} we have recently created a Division of Project Compliance and Administration within the Office of Hydropower Licensing in order to ensure prompt compliance with license terms and conditions. Under delegation of authority from the Commission, the Office and Division have authority to act on specified types of filings related to compliance matters. Therefore, whenever under Section A.6 of the agreement the signatories request the Commission to refer a dispute to the presiding judge in the mid-Columbia proceeding, the Commission will in most cases refer the dispute to this Division. However, the Commission will use its best efforts to resolve any dispute within the time frames set forth in the agreement. In appropriate circumstances, such as where there are material facts in dispute, we may refer a matter to an

^{32/} In addition to its wide circulation for public review and comment as a part of the draft and final EIS in this proceeding, the settlement agreement was also subject to a public notice and comment proceeding before the Pacific Northwest Power Planning Council as part of the Council's process to amend the Columbia River Fish and Wildlife Program to incorporate the terms of the settlement therein. The Council held public hearings on the proposal in Washington, Oregon, Idaho and Montana in June and July, 1987, before amending the program and supporting the settlement agreement. See pages 6-7, 26 of this order.

^{33/} See footnote 1, supra.

administrative law judge. In either event, the initial staff decision is subject to de novo review by the Commission. ^{34/}

We emphasize that any resolution by the Coordinating Committee, or a third party, pursuant to Section A.6 that contemplates a change in the license or in the operation of the project thereunder shall result in the filing of an appropriate application therefor by the licensee as soon as practicable after the dispute is resolved.

Finally, we note that, as with the Vernita Bar phase settlement approved on December 9, 1988, approval of this settlement does not affect the Commission's authority, as reserved in various articles of this license, to require, after notice and opportunity for hearing, alterations to project facilities or operations that may be warranted by changed circumstances. We intend any such reserved authority would be exercised only after full consideration of the benefit sought to be achieved thereby as balanced against the possibility that as a consequence the settlement could be voided, thereby eliminating the benefits obtained thereunder. If any party voids the agreement, the licensee shall, within 30 days, so inform the Commission in writing.

Environmental Impact Statement

On November 12, 1986, a notice of intent to prepare an environmental impact statement (EIS) was issued. Scoping meetings were held in Olympia and Wenatchee, Washington. Two scoping documents were prepared by the staff as part of the scoping process. The first was circulated to enable federal, state and local resource agencies and other interested parties to effectively participate in and contribute to the process. The second was prepared and released later to provide the public with a refined presentation and discussion of significant issues by the staff after the initial public and agency input. A draft EIS was circulated for comment in September 1987. All comments were carefully considered, and corrections and revisions were incorporated into the final EIS which was issued in July 1988.

The staff examined five alternative actions: (1) continued operation of the existing project, with supplemental hatchery releases of juvenile fish to partially compensate for mortality at

^{34/} In order to keep our staff informed on compliance matters related to the settlement agreement, we are requiring that the licensee file a report within 30 days of any violation of, or compliance disputes under, the settlement agreement explaining the circumstances.

the dam; (2) various operating and design alternatives identified by the staff that would improve survival of juvenile and adult fish passing the dam, e.g., various daily spill regimes and installation of fish bypass screens (with a range of assumed guidance efficiencies); (3) fishery mitigation concepts embodied in the instant settlement agreement; (4) a no-action alternative consisting of either denial of a new license or issuance of a non-power license, which in either case would result in cessation of power production at the project; and (5) a coal-fired, steam-electric plant that would likely be required in the long term if the no-action alternative was implemented. The environmental impacts of each alternative were considered together with possible mitigation and enhancement efforts.

The significant environmental impacts of the project as originally proposed for relicensing by the PUD would include continued mortality to downstream migrants at present levels and replacing some of the wild stocks lost with a lesser number of hatchery-produced fish. The cost of project power to Puget would increase by about one percent above Puget's 1986 project power cost. Finally, the project would result in the unmitigated loss of about 145 acres of riparian and upland habitat plus 80 acres of orchard, a long-term net loss of terrestrial wildlife habitat ranging from a minimum of 145 acres to a maximum of 382 acres, and increased human disturbance and loss of habitat for the bald eagle. ^{35/}

Implementation of the no-action alternative, which could involve either the denial of a new license for the project or the issuance of a non-power license, would mostly lead to the eventual development of another electrical power generating source, such as a coal-fired powerplant similar to that proposed for the Creston, Washington, site. Potential significant impacts of such a facility include using about 1,800 acres of land already dedicated to another use, consuming an annual average of 5.2 billion gallons of alluvial groundwater during operation, and temporary and localized increases in erosion-induced turbidity and sedimentation in local streams during construction. In addition, such a plant would consume about 132 million tons of coal during the operational life of the plant and release oxides of carbon, nitrogen and sulfur into the atmosphere as a result of coal combustion. There would be about 1500 acres of land disturbed for mining of coal and dedication of about 1,000 acres for fly ash disposal during the project's lifetime. There would also be visual impacts from cooling tower vapor plumes, from tall combustion stacks with visible emission plumes, and from the generally massive plant

^{35/} See final EIS Sections 2.1, 3.1, 4.1, 4.4 and 5.1.1.

structures. Finally, there would be major socioeconomic impacts to any local community. 36/

The operating alternative evaluated was increasing spill over the dam at Rock Island. This could reduce mortality to downstream migrants below ten percent, but at least thirty percent of the available flow would have to be spilled instead of being used to generate. For this reason spill is expensive, but it does reduce losses to valuable wild stocks. This alternative would, because it leaves the existing project intact, result in the unmitigated loss of about 145 acres of riparian and upland habitat, 80 acres of orchard, a long-term net loss of terrestrial wildlife habitat on 13 to 382 acres, and increased human disturbance to, and loss of habitat for, the bald eagle. 37/

The structural alternative evaluated was use of bypass screens to divert downstream migrants away from turbine intakes, which is a widely accepted method for reducing mortality at hydropower projects. The staff concluded that bypass is the most effective mitigation measure available to protect migrants, and the protection is available throughout the migration season for all species at all river flows. In addition, bypass does not reduce generation. However, to date bypass has not been fully demonstrated to be technically feasible for Powerhouse No. 2 at Rock Island. Because this alternative would also leave the existing project intact, it would result in the same terrestrial impacts noted above in the discussion of spill. 38/

The final alternative evaluated is that contained in the settlement agreement. The settlement attempts to reduce losses to migrants at the dam, beginning with the most effective means first and utilizing less effective measures as secondary options (bypass if feasible, or spill if bypass infeasible). Actual total project mortality would be measured after losses of juvenile migrants have been reduced. Lost fish would be replaced in the manner least disruptive to the genetic integrity of existing wild stocks. The staff determined that the settlement agreement would effectively accomplish a 100 percent compensation for impacts to salmon and steelhead migrants. Under the twenty percent spring spill scenario, the commercial value of the Rock Island fishery could increase by \$13 to \$29 thousand and the sport value could increase by \$18 to \$63 thousand. Under the bypass system scenario (both

36/ See final EIS Sections 2.2.1, 2.2.2, 3.2.1, 3.2.2, 4.2.1, 4.2.2, 4.4 and 5.1.2.1.

37/ See final EIS Section 2.2.3.3, 3.2.3, 4.2.3, 4.4 and 5.1.2.2.

38/ Id.

powerhouses), the commercial value of the Rock Island fishery could increase by \$115 to \$380 thousand and the sport value by \$73 to \$348 thousand. Finally, under the hatchery scenario, the commercial value of the Rock Island fishery could increase by \$716 to \$748 thousand and the sport fishery by \$339 to \$531 thousand. The staff estimated that the settlement agreement would increase the project power cost to Puget by 9 to 16 percent above the utility's 1986 cost, depending on the fish mitigation and compensation scenario assumed. This alternative would have the same terrestrial impacts as those above that left the existing project intact. 39/

The final EIS recommends relicensing the Rock Island Project with implementation of the fish mitigation measures specified in the settlement agreement. The staff's analyses strongly indicate that the PUD's initial proposal for project operation and fishery mitigation under relicensing would, through proposed hatchery releases without any measures to reduce losses at the dam, continue to contribute to declines (and possible extinction) of important and irreplaceable wild stocks of salmon and steelhead. Additionally, the proposed hatchery compensation plan would not mitigate mortality at the project and would not be consistent with the massive regional effort to protect and enhance the anadromous fishery in the Columbia River Basin. The PUD's initially proposed project operation and fishery mitigation plan would not meet the stipulations and goals of the Council's most recent Fish and Wildlife Program, which guides regional fishery planning efforts through coordinated planning input by all fishery management agencies.

The staff's quantitative evaluation of various fishery mitigation strategies strongly indicates that substantial increases in fish survival could probably be achieved at the Rock Island Project. Implementation of mechanical fish bypass facilities and/or increased project spills during periods of the year when migrants pass the dam (spring and summer) could conceivably and realistically reduce mortality by several percentage points.

Some questions exist regarding the technical feasibility of bypass screens at Rock Island in terms of the level of effectiveness that they could achieve at the second powerhouse. The staff's modeling of bypass and spill as alternatives, however, suggests (assuming that certain bypass efficiencies could be achieved) that substantial reductions in losses could be realized at the Rock Island Project. Additional compensation could be achieved with hatchery releases up to levels equal to the

39/ See final EIS Sections 2.2.3.4, 3.2.3, 4.2.3, 4.4, and 5.1.2.2.

difference between the numbers of fish that could be saved through reduced mortality associated with bypass and spill and the total number of fish killed at the project.

The settlement agreement defines a two-phased hatchery compensation program that would establish and guide production and release of juvenile fish to avoid or minimize adverse impacts to wild stocks and adjust hatchery compensation based on measured project mortalities (to be determined as part of the second phase). Hatchery releases under this carefully guided program, and with the benefit of additional studies to minimize effects of additional hatchery releases, would be less likely to threaten populations of existing wild stocks of anadromous fish.

As noted above, the staff evaluated the settlement agreement as a design and operating alternative. The staff concluded that the mitigation concept in the settlement agreement is fully consistent with the results and conclusions of the staff's quantitative analysis of various individual mitigation strategies. The concept, which includes installation of fish bypass facilities and/or implementation of spring and possibly summer spill, with hatchery releases of juveniles (pursuant to results of genetics and outplanting studies) to make up the rest of the loss not mitigated by bypass or spill, would probably allow full compensation for present and future mortality at the Rock Island Project.

The staff also agrees with the necessity of conducting additional studies, as specified in the settlement agreement, regarding juvenile mortality at the project and the feasibility and effectiveness of specific mechanical bypass systems for the project. The reasons include the existing level of uncertainty concerning fish mortality and bypass effectiveness, the cost of such mitigation, and the potential environmental consequences of ineffective mitigation. Hence, the staff believes that additional studies, as proposed in the settlement agreement, are fully justified and necessary.

The staff's fishery and economic analyses set forth in the final EIS indicate that very substantial increases in the total numbers of juvenile migrants passing the Rock Island Project could be achieved by implementing the provisions of the settlement agreement, and that this increased survival would (assuming implementation of fishery mitigation plans for other mainstem dams) result in increases to the commercial and sport value of the Columbia River salmon and steelhead fishery. This benefit would accrue at the expense of an increased cost of power delivered to Puget, which purchases the majority of electricity produced by the Rock Island Project.

While increases in the cost of power are considered significant by the staff, they must be weighed against the benefits of increased valuation of the Columbia River commercial and sport fishery. Given the present depressed state of most of the Columbia River anadromous fish stocks and the goal of the Council to double the size of the present anadromous fishery, the staff believes that the fishery benefits that would accrue as a result of operation under stipulations of the settlement agreement (in concert with other planned improvements in fish passage facilities at downstream dams) justify the increased capital and operating costs of the specific improvements required to produce the benefits.

The staff concluded in the final EIS that wildlife mitigation implemented to date or planned would not fully compensate for habitat lost as a result of inundation related to operation of the second powerhouse. This conclusion is based in part on the staff's belief that effectiveness of the wildlife mitigation proposed for the Wenatchee River recreational sites would be substantially and negatively affected by the recreational development planned by the licensee for the same areas. The staff indicated in Section 4.1.4.2 of the final EIS that the best mitigation, solely from the wildlife perspective, for in-kind compensation of the lost habitat would be to devote the Wenatchee River confluence recreational sites to wildlife mitigation only, i.e., that no recreational development take place at either the north or south confluence sites. This conclusion is based principally on the premise that the most desirable mitigation is in-kind replacement of habitat within the general area where it was lost. The staff believes, however, that both wildlife mitigation and recreational development are important in the area and that both can be achieved.

During the scoping process for the EIS, federal, state, and local recreational interests in the state of Washington urged the Commission to refrain from recommendations or action that would alter the existing recreational plans previously authorized by the Commission. In view of this public interest, but also in consideration of the staff's mitigation conclusions above, the staff recommended that, in lieu of foregoing development of the Wenatchee River recreational sites for wildlife mitigation as was suggested in Section 4.1.4.2, the licensee develop offsite lands for the purpose of compensation of lost habitat and as general wildlife enhancement.

Specifically, the staff recommended that, for the life of the new Rock Island license, the licensee maintain and enhance as wildlife habitat the approximately 1,000 acres of land (the so-called Water District lands owned by the PUD) identified under the Wildlife Habitat Mitigation subsection of Section 4.1.4.2 as the third alternative. Because this land is already under the ownership

of the PUD, there would be no significant cost to the PUD's county rate payers or major outside power purchasers. Additionally, maintenance of the land as wildlife habitat would be consistent with present use of the land as a water supply area for the PUD's water district.

In summary, the staff concluded in the final EIS that relicensing the Rock Island Project with the fishery mitigation identified in the settlement agreement and with the wildlife mitigation discussed above would provide a continued source of economical, safe, and reliable electric power for the region, with a high probability of fully mitigating existing and future fish losses at the dam and replacement of lost wildlife habitat. The mitigation concepts in the settlement agreement are based upon proven strategies. Based upon the staff's modeling studies, recommendation of these strategies in the settlement agreement is consistent with the staff's conclusions regarding their probable effectiveness (given certain assumptions) if implemented at the Rock Island Project.

We have reviewed the final EIS and concur with its recommendations. We believe that the document complies with the requirements of the National Environmental Policy Act (NEPA), the Council on Environmental Quality's implementing regulations, and our own regulations under NEPA. ^{40/} Based on the record in this proceeding, including the final EIS, we are including in the new license conditions that will implement staff's recommendations in the final EIS. For fisheries matters these include, among other things: (1) notifying the Commission's Office of Hydropower Licensing (OHL) and the Portland Regional Office (PRO) of all meetings of the Rock Island Coordinating Committee, (2) filing an annual report outlining accomplishments of the previous year and a schedule of goals for the coming year, (3) filing the results of all studies and tests with the Commission, (4) filing for Commission approval functional design drawings of any juvenile fish bypass systems, any fish hatcheries or satellite facilities, and any fish ladders that may result from implementation of the settlement agreement, and (5) filing as-built drawings with the Commission within six months after construction or modification of any bypass systems, hatcheries, or fish ladders.

With respect to wildlife concerns, the license requires the preparation of a wildlife management plan that should (1) identify all enhancement opportunities for areas under consideration for wildlife mitigation or enhancement, (2) describe in detail site-specific mitigation or enhancement measures to provide maximum replacement of riparian wildlife habitats, and (3) outline

^{40/} 18 C.F.R. Part 380 (1988).

mitigation/enhancement goals and specific plans for any studies or monitoring programs needed to achieve these goals.

In order to ensure that there is no impact to the bald eagle -- a federally listed threatened species -- the license requires that (1) heavy construction activities at certain sites be limited from December 1 to March 1, (2) shoreline hiking trails be placed a significant distance from eagle perch trees, and (3) large trees and snags along the perimeter of the reservoir not be removed. The license also requires the preparation and implementation of a plan to monitor the effect on the bald eagle of recreational use of project lands and waters.

The license also contains conditions to mitigate other project impacts which, although not expected to be significant, are nevertheless important. Project operation results in mortality to Canada goose goslings that are swept over the spillway. Increased spill in May could increase gosling mortality. ^{41/} The licensee will be required to monitor this population to quantify the degree of mortality. Based on the results of the study, the licensee must develop appropriate mitigative measures, such as enhancing upstream nesting habitat. The licensee has proposed to install 60 wood duck nest structures. In order to ensure that they serve their intended purposes, the license requires a study to evaluate the effectiveness of the program and a plan to implement measures to improve wood duck production in the project area.

Recreational development and project maintenance activities could affect rare plant species if they exist in the project area. The license requires a survey to be conducted and the results to be filed within six months from the date of issuance of this order. Any area that would likely be affected by recreational development and use and by project maintenance activities, such as transmission right-of-way management, must be surveyed.

Finally, although no significant impacts to cultural resources are expected from relicensing, continued project operation could affect archeological sites listed in or eligible for inclusion in the National Register of Historic Places. ^{42/} The PUD has prepared a draft cultural resources management plan to avoid or mitigate impacts to the sites. The plan has been reviewed by the Washington State Historic Preservation Officer (SHPO) and the Colville Tribes. The license requires the plan to be completed after further consultation with the SHPO, the Colville Tribes, and the Advisory Council on Historic Preservation (ACHP). The PUD must also file a

^{41/} See final EIS at pages 4-14 to 4-16.

^{42/} See final EIS Section 4.1.8.

report containing the results of investigations identified in the plan, any necessary revisions to the plan, and copies of letters from the SHPO, ACHP, and Colville Tribes accepting the report. The project also has the potential to affect archeological and historic sites not previously identified. Events associated with continued operation, such as erosion along the reservoir shoreline, have the potential to uncover buried sites. The license requires the implementation of measures to avoid or minimize impacts to any such sites.

Pacific Northwest Power Planning and Conservation Act

Under Section 4(h) of the Pacific Northwest Power Planning and Conservation Act (PNPPCA), the Northwest Power Planning Council (Council) developed the Columbia River Basin Fish and Wildlife Program (Program) to protect, mitigate and enhance fish and wildlife resources associated with the development and operation of hydroelectric projects within the Columbia River Basin. Section 4(h) further states that appropriate agencies shall take into account, to the fullest extent practicable, the Program adopted under the PNPPCA. ^{43/}

As noted previously, in August 1987, the Council adopted amendments to the Program that incorporate the settlement agreement. The license is therefore in compliance with the Program. Further, we are reserving the authority in this license to require future alterations in project structures and operation in order to take into account, to the fullest extent practicable, the applicable provisions of the Program.

Comprehensive Plans

Section 10(a)(2) of the FPA ^{44/} requires the Commission to consider the extent to which a project is consistent with federal or state comprehensive plans for improving, developing, or conserving a waterway or waterways affected by the project. The Commission has provided an interpretation of comprehensive plans under Section 10(a)(2). ^{45/} We reviewed five comprehensive plans

^{43/} See notes 22 and 23, *supra*.

^{44/} 16 U.S.C. § 803(a)(2) (1986).

^{45/} Order No. 481-A, 53 Fed. Reg. 15,802 (May 4, 1988), III FERC Stats. & Regs. ¶ 30,811 (1988).

that address various aspects of waterway management in relation to the proposed project. ^{46/} No conflicts were found.

Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the FPA ^{47/} requires the Commission to include license conditions based on recommendations of federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. In the final EIS for the Rock Island Project, the staff addresses the concerns of the federal and state fish and wildlife agencies and makes recommendations consistent with those of the agencies. By virtue of our approval of the settlement agreement herein, with which all the relevant fish and wildlife agencies have concurred, and our adoption of license articles that implement the recommendations in the final EIS, we conclude that there are no unresolved fish and wildlife issues remaining in this proceeding.

Consumption Efficiency Improvement Program

Section 10(a)(2)(C) of the FPA ^{48/} requires that the Commission, in considering license applications submitted by an applicant primarily engaged in the generation or sale of electric power, consider the electricity consumption efficiency improvement programs of the applicant, including its plans, performance, and capabilities for encouraging or assisting its customers to conserve

^{46/} Northwest Conservation and Electric Power Plan, 1986, Columbia River Basin Fish and Wildlife Program, 1987, as amended, Northwest Power Planning Council; Columbia River Fish Management Plan, 1987, State of Washington, State of Oregon, State of Idaho, Confederated Tribes of the Warm Springs Reservation, Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe, and Confederated Tribes and Bands of the Yakima Indian Nation; Final environmental impact statement and fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978, March 1978, Department of Commerce; Eighth amendment to the fishery management plan for commercial and recreational salmon fisheries off the coasts of Washington, Oregon, and California commencing in 1978, January 1988, Pacific Fishery Management Council; Hood Canal salmon management plan, October 1985, Washington Department for Fisheries, Point No Point Treaty Council, U.S. Fish and Wildlife Service.

^{47/} 16 U.S.C. § 803(j) (1986).

^{48/} 16 U.S.C. § 803(a)(2)(C) (1986).

electricity costs effectively, taking into account the published policies, restrictions, and requirements of relevant state regulatory authorities applicable to the applicant. Since the PUD is primarily engaged in the generation and sale of electric power, this application comes under the scope of Section 10(a)(2)(C).

The PUD is not subject to any regulatory authority requiring adherence to defined conservation or load management programs. The PUD's efforts to promote energy conservation programs and energy use efficiency have been voluntary and are of long standing. As early as the mid-1950's, the PUD initiated programs to inform its consumers about the most efficient and economic use of electric heating and air conditioning, home and business conservation measures, and new electrical products and their use. As early as the 1960's the PUD sponsored the Gold Medallion Home Program, which established residential standards for insulation in Chelan County.

In 1980, the PUD offered its customers a more sophisticated energy analysis program that helped the PUD qualify for various federal programs, comply with new federal standards, and meet the newly emerging interest in conservation programs. The PUD's ongoing and planned activities to promote energy use efficiency improvement include programs to improve hot water heating efficiency, help consumers improve the efficiency of electricity use in the home, initiate home energy loan programs, facilitate low-income weatherization, and disseminate energy information to consumers in the residential and commercial sectors. The PUD also participated in BPA's Short-term Energy Buy Back and the Super Good Cents programs, completed programs to meet federal guidelines for Commercial and Apartment Conservation Services, and initiated an energy and demand reduction program in the tree-fruit cold storage industry. Finally, the PUD initiated programs to improve the generation, distribution, and efficiency of street lighting on the PUD system.

In light of these facts, the Commission concludes that Chelan has made and is continuing to make a good-faith effort to reduce the consumption of electricity on its power system.

Section 15(a) of the Federal Power Act

Section 15(a) of the FPA ^{49/} requires the Commission to consider in writing a number of factors in acting on applications for new license following the expiration of existing licenses.

1. The plans and abilities of the applicant to comply with the articles, terms, and conditions of any license issued to

^{49/} 16 U.S.C. 808(a) (1986).

it and with other provisions of Part I of the Act (Section 15(a)(2)(A))

We have reviewed the license application and the PUD's past record of compliance with the existing license to determine the PUD's ability to comply with the articles, terms, and conditions of any license issued to it and with other applicable provisions to this part of the FPA. The PUD has satisfactorily complied with the terms and conditions of the existing license since it was issued, and we believe that the PUD would be able to satisfy fully the conditions of this new license.

2. The plans of the applicant to manage, operate, and maintain the project safely (Section 15(a)(2)(B))

We have reviewed the PUD's plans to manage, operate and maintain the project safely. The PUD proposes no change in project operation that would adversely affect project safety. Based on review of the specific information provided by the PUD on the aspects of the project that affect public safety and on a review of project records, we conclude that the PUD's plans are adequate.

Pursuant to Part 12 of our regulations, on May 11, 1983, the PUD filed an emergency action plan (EAP), which was approved on June 2, 1983, has submitted the required independent-consultant safety inspection reports, and has complied with the recommendations from its consultants and from our Regional Office.

The PUD has shown a regard for public safety by installing boating safety barriers at the reservoir, placing fencing around transformers, water control facilities, and other potentially dangerous equipment, and notifying the public of potentially hazardous conditions that may result from the operations of the hydroelectric facilities.

No fatalities have been experienced at the project, and the last employee lost-time accident occurred in 1986.

Based on the PUD's safety-compliance record, we conclude that the PUD can be expected to cooperate with the Commission's requests and to comply fully with the terms and conditions of any new license issued for the project.

3. The plans and abilities of the applicant to operate and maintain the project in a manner most likely to provide efficient and reliable electric service (Section 15(a)(2)(C))

A review of the PUD's past operation record shows that the project has been and is being operated in an efficient and reliable manner.

In accordance with the Pacific Northwest Coordination Agreement and the Mid-Columbia Hourly Coordination Agreement, the project is operated in coordination with the other projects in the Columbia River Basin to maximize the economic utilization of the water power resource.

Whenever possible, the PUD has modernized the project to increase project capacity, efficiency, and reliability. The original project included four generating units. Six additional units were installed in 1951; in 1979, the addition of a new powerhouse containing eight bulb-turbine units was completed. Over the period of license, the PUD has upgraded and replaced worn and damaged equipment when necessary to ensure reliable project operation.

We conclude that if the PUD were to receive a new license, it would continue to operate the project in an efficient and reliable manner.

4. The need of the applicant, over the short and long terms, for the electricity generated by the project to serve its customers (Section 15(a)(2)(D)) 50/

Power from the Rock Island Project is an integral part of the PUD's short- and long-term plans to serve the needs of its customers at the lowest reasonable cost. In planning hydroelectric resource acquisition and development, the PUD designed hydroelectric projects to make full use of available water resources at the project sites and to capture economies of scale in pursuing comprehensive development of a site. As a result, the PUD has developed resources to provide service to its local retail customers and to sell power at wholesale to a number of regional utilities.

The PUD established regional markets for its project power through the negotiation of long-term contracts with utilities in the northwest. A substantial portion of the electricity generated by the Rock Island Project is sold by the PUD at wholesale to the Puget Sound Power and Light Company (Puget) under a long-term power sales contract. By the terms of the contract, the PUD is entitled to annually increasing withdrawals of capacity from the first Rock Island powerhouse until the total withdrawal reaches 50 percent of the total capacity on July 1, 1999. After that time, the withdrawal remains at 50 percent until the contract expires in 2012. Beginning on July 1, 2000, the PUD will also have a contractual right to exercise an option for annually increasing

50/ See also Section 1.2 of the final EIS.

withdrawals from the second project powerhouse up to a maximum of 50 percent.

The PUD's other sources of power include similar withdrawal arrangements for the Rocky Reach Project No. 2145 51/ and the Lake Chelan Project No. 637, 52/ and a one-percent share in the Columbia Storage Power Exchange (CSPE). The CSPE contract provides an annually diminishing amount of capacity and energy that is to terminate in 2003. Under the terms of the Columbia River Treaty, the PUD is required to return one half of the benefits from upstream storage development to Canada. This Canadian entitlement allocation decreases until 1995 and then increases as additional upstream projects are compensated under terms of the treaty. Because of the large electrical heating component of the PUD's load, winter loads can not be served entirely from the PUD's share of its resources.

The generation at the PUD's project is governed by water released from upstream federal storage dams. These winter water releases are not sufficient to supply the PUD's high winter electric requirements, and the PUD's net remaining capacity and energy requirements are met by power purchases from BPA and by the PUD's conservation programs. Such purchases are projected to be required by the PUD through 2012. The PUD considers projections of power purchases beyond 2012 to be beyond a reasonable horizon of certainty, and we concur with that assessment.

Puget is an investor-owned utility that depends heavily on Rock Island power output. The project contributes about 14 percent of Puget's available peak resources and about 32 percent of the total hydroelectric production used to meet Puget's load requirements. Both capacity and energy deficits are projected to occur on Puget's system as early as the 1988-1989 operating year. Should the PUD not receive a new license for the project, winter energy deficits on the PUD system and both capacity and energy deficits on the Puget system will be increased by the loss of the project power. The cost of alternative sources of power to replace the relatively low cost of project power would be higher for both the PUD and for Puget. The customers of both would be adversely affected by loss of the project output.

Additional conservation and load management measures, beyond those already considered in the respective forecasts, were determined by both systems to be inadequate as replacement for project power on both quality and cost bases. Purchased power is

51/ 18 F.P.C. 25 (1957).

52/ 15 FERC ¶ 62,168 (1981).

considered to be the most likely alternative to be pursued by both the PUD and Puget in both the short and long terms. Because the region is expected to have a resource deficit again sometime in the mid- to late-1990's, power purchases from BPA are also considered to be less than comparable to project power, BPA contracts being subject to cutoff on essentially 5 years' notice. Even though alternative cost analyses assume power available for a number of years at a cost equal to BPA's forecast of its new resource rate, the PUD sees no assurance of such availability and does not consider such purchases as a suitable substitute for project power. The PUD estimates that the additional costs to its retail customers associated with purchases of BPA power in lieu of Rock Island power would be about \$240 per customer per year in 1988, and \$464 per customer per year in 2011.

We conclude that the PUD has a need for the project power in the short and long term, and that the loss of project power and the subsequent transfer of the PUD's and Puget's load requirements to BPA would increase BPA's load requirements and costs and would contribute to increasing rates for BPA customers, in addition to increasing the costs for the PUD's and Puget's customers.

5. The applicant's existing and planned transmission services (Section 15(A)(2)(E))

The two project powerhouses are electrically connected with an interconnected transmission system through six 115-kV transmission lines that join the McKenzie-Valhalla substation 115-kV buses. If a new license is issued to the PUD or to another utility, no changes are likely in the transmission services provided by the transmission facilities. In either case, the transmission lines could be used to deliver power to the PUD's customers or to wheel project power to other areas. If the PUD is not issued a new license and a new licensee chooses to wheel power over the federal system from the Valhalla substation, the PUD's unlicensed transmission from Valhalla would have to undergo minimal changes to accommodate transmission from other power sources owned by the PUD.

Issuance of a nonpower license would require major modification of the PUD and adjacent utility transmission facilities. Major problems, arising from limited transformation capacity of the area's 115-kV transmission network, would follow from the absence of all project power. With project power unavailable, an outage of either substation transformer stepdown capacity or of certain 115-kV transmission lines would produce unacceptable overloading of remaining facilities, and would violate established reliability criteria. In addition to the unacceptable reliability problems, losses and voltage drops would increase and would require additional modification of the transmission service. Transmission modification that might be required in the absence of project power would include an expenditure of \$3 million to

transfer load to the 230-kV network by changing transformation at the Valhalla substation from 115 kV to 230 kV and an expenditure of \$3 million to add 230-kV transmission and transformer stepdown facilities to serve the PUD load centers.

6. Whether the plans of the applicant will be achieved, to the greatest extent possible, in a cost-effective manner (Section 15(a)(2)(F))

Other than the project facilities identified in the settlement agreement, the PUD plans no significant modifications to the project. As noted above, the final EIS concluded, and we agree, that relicensing the project in accordance with the settlement agreement was the preferred alternative based on environmental and economic considerations. We conclude that the project, as constructed and with the modifications to project structures and operations discussed herein, adequately develops the hydropower potential of the site and represents a very economical use of a renewable resource.

Safety of Project Structures

The project is safe against sliding and overturning at normal maximum headwater elevation 614.1 feet, normal tailwater elevation of 571.6 feet (U.S.G.S. datum), plus earthquake loading of 0.1g, and with a flood headwater elevation of 619.5 feet and tailwater elevation of 606.2 feet. For both cases the structures were found to be safe against sliding and overturning.

The largest flood of record at Rock Island was 800,000 cfs in 1894, but the Corps of Engineers estimates that, with regulation from the upstream storage projects, the same flood would now have a peak discharge of 464,000 cubic feet per second (cfs). With Rock Island Reservoir at flood elevation 619.5, the spillway is capable of discharging 960,000 cfs. At this flow, the tailwater surface would be about elevation 606 feet.

The probable maximum flood (PMF) at Chief Joseph Dam with upstream regulation is estimated by the Corps of Engineers to be 1,200,000 cfs. In proportion to the size of the drainage areas, the regulated PMF at Rock Island would be 1,425,000 cfs. At this flow, the Rock Island Reservoir would surcharge to about elevation 632 feet and the tailwater would be at elevation 623 feet. The differential between headwater and tailwater would be about 13.5 feet when discharging the spillway design flood of 960,000 cfs, and about 9.0 feet when discharging 1,425,000. In view of the comparatively small head differential and the insignificant amount of storage that would be released, there would be slight additional hazard to downstream areas in the event of failure of the dam during the occurrence of the PMF.

The Corps of Engineers, in its letter to the licensee dated October 13, 1971, concluded that the spillway capacity is well within acceptable limits for passing major floods, considering the relatively small differential in headwater and tailwater at the project. We conclude that the spillway is adequate.

The Board of Consultants, formed to monitor the construction of the second Rock Island powerhouse, met from May 13 to 15, 1980, for the final review of the engineering and construction of the project. In its final report, the Board recommended that the licensee continue the structural monitoring plan, which provides for monitoring of dam alignment and settlement, uplift, relief drains both for flows and pressures, post-tensioned anchors, and for regular inspection of the "loose bolting" attachment of the trash racks. Article 301 requires the licensee to continue the structural monitoring plan.

The latest safety inspection report filed by the independent consultant for the licensee, under Part 12 of the Commission's regulations, stated that the project appears to be in a safe and stable condition. The report noted a small amount of displacement of the north abutment structure, and some siltation of the drains in Powerhouse Number 2. The report recommended that the licensee institute a program for monitoring the displacement of the north abutment structure, and recommended cleaning and monitoring the flow from the foundation drains in Powerhouse Number 2. The licensee submitted its plans for implementing the consultant's recommendations on April 27, 1987. The Commission's Regional Office accepted the plans and indicates that the licensee is making satisfactory progress in implementing them.

The project has been well maintained and is safe and adequate for continued operation.

Comprehensive Development

The project has a total installed capacity of 622.5 MW, ^{53/} with a hydraulic capacity of 220,000 cfs, which is the hydraulic capacity of the Rocky Reach plant located immediately upstream from the Rock Island Project on the Columbia River. The power production of Rock Island depends to a great extent upon the discharge from the upstream plants, since its limited storage capacity is sufficient for pondage regulation only and is not adequate for flood control or regulation of flows from upstream

^{53/} The project, with its average annual generation of 2,780 million kWh, will utilize a renewable resource that will save the equivalent of approximately 4,565,000 barrels of oil or 1,287,000 tons of coal per year.

projects. With the exception of the undeveloped river below Priest Rapids Dam, the entire reach of the Columbia River has been developed for hydroelectric power.

The Columbia River is a navigable waterway. At the present time there is no commercial navigation and no navigational facilities in the vicinity of this reach of the Columbia River. However, an investigation was conducted by hydraulic model test, in coordination with the Seattle District, Corps of Engineers, and the results demonstrated that the potential installation of navigation locks is compatible with the Rock Island Project. Standard license article 12 reserves authority to the United States to use water in such amount as may be necessary for the purposes of navigation, should the installation of such locks be undertaken by the United States.

There are irrigation facilities utilizing waters from the Rock Island reservoir. The operation of the project has no adverse effect on these installations.

The PUD, as a member of the Western Systems Coordinating Council, the Pacific Northwest Public Power Council, the Northwest Power Pool, and the Pacific Northwest Utilities Conference Committee, is involved in the study and analysis of long-range projection of power loads, generating needs, and means by which those needs can be met through additional facilities.

Based upon a review of agency and public comments filed in this proceeding and on the staff's independent analysis, the Rock Island Project is best adapted to a comprehensive plan for the Columbia River.

License Term

A license will be issued for a period of forty years. Such a term reflects the significant investment in the original license near the end of that license term for a new powerhouse and increased capacity of 212.1 MW. This is consistent with our policy on this issue. ^{54/}

Revised Exhibits

The licensee filed on October 18, 1976, revised Exhibits J and K pursuant to Article 68 of Amendment 17 to the license to show the project boundary around the second powerhouse. Also, the Commission issued on October 19, 1979, an order approving

^{54/} See, e.g., Montana Power Company, 56 F.P.C. 2008 at 2012 (1976).

Exhibit R, 55/ and issued on July 17, 1980, an order amending license for the Rock Island Project. 56/ Article 302 herein requires the licensee to file a revised Exhibit G to supersede the Exhibits J and K filed October 18, 1976, and to reflect any changes in the project as a result of the orders referenced above.

The Commission orders:

(A) This license is issued to Public Utility District No. 1 of Chelan County, Washington, for a period of 40 years, effective the first day of the month in which this order is issued, to continue to operate and maintain the Rock Island Project No. 943, located in Chelan and Douglas Counties, Washington, on the Columbia River, a navigable waterway of the United States, and occupying lands of the United States under the administration of the U.S. Bureau of Land Management. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as a part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

(B) The Rock Island Project No. 943 consists of:

(1) All lands, to the extent of the licensee's interests in those lands, constituting the project area and enclosed by the project boundary. The project area and boundary are shown and described by certain exhibits that form part of the application for license and that are designated and described as:

Exhibit	FERC No. 943-	Showing
J	225	General Map-Project Area
K-1 to K-25	132 through 156	Detail Map-Project Area
K-S1 to K-S9	157 through 165	Survey Data-Project Area
K-T1	266	Detail Map-Transmission Lines

(2) Project works consisting of:

(a) a concrete gravity dam, about 3,580 feet long, with a gated spillway section 1,184 long containing 31 crest gates; (b) a reservoir extending about 20 miles upstream having a normal maximum forebay elevation 614.1 feet U.S.G.S. and a gross storage capacity of 130,000 acre-feet and a usable storage capacity of 11,000 acre-feet at a maximum reservoir drawdown of 4 feet for power operations; (c) a concrete powerhouse about 870 feet long, integral

55/ 9 FERC ¶ 62,003 (1979).

56/ 12 FERC ¶ 62,032 (1980).

with the dam, containing one 15,000-kW generating unit, three 20,700-kW generating units, and six 22,500-kW generating units (10 units totaling 212.1 MW); (d) a step-up substation on the powerhouse roof; (e) a high-tension switching station on Rock Island; (f) four single-circuit 115-kV transmission lines extending from the switching station for a distance of about two miles to the McKenzie switchyard; (g) a second project powerhouse at the right bank about 465 feet long and 200 feet wide, containing eight 51.3 MW horizontal shaft, bulb-turbine type generation units (8 units totaling 410.4 MW); (h) step-up transformers at the second powerhouse connected to two single-circuit 115-kV transmission lines extending about two miles to the McKenzie-Valhalla substation; (i) three fishways and related fish facilities; and (j) appurtenant facilities.

The location, nature and character of these project works are generally shown and described by the exhibits cited above and more specifically shown and described by certain other exhibits that also form a part of the application for license and that are described and designated as:

Exhibit L	FERC No. 943-	Titled
1	185	General Plan
2	186	Left Abutment Plan
3	187	First Powerhouse Plan
4	188	First Powerhouse Sections
5	189	First Powerhouse Main One Line Diagram
6	190	Spillway Dam
7	191	Second Powerhouse Plan
8	192	Second Powerhouse Section
9	193	Second Powerhouse Main One Line Diagram
10	194	Right Abutment Plan
13	197	Middle Fishway Sheet 1 of 2
14	198	Middle Fishway Sheet 2 of 2 57/

Exhibit M - "General Description of Equipment," consisting of eleven typed pages filed on May 29, 1980, as part of the application for new license.

57/ By orders issued February 2, 1988, 42 FERC ¶ 62,082, and December 16, 1988, 45 FERC ¶ 62,229, the Director approved modifications to the left bank and right bank fishways and required that as-built drawings be filed within 90 days after construction of the modifications.

Exhibit R - "Recreation Plan for Rock Island Project," consisting of 35 pages of text and 7 drawings (FERC Nos. 943-216 and -217, and -219 through -223) filed March 1, 1978, and approved October 19, 1979.

(3) All of the structures, fixtures, equipment, or facilities used or useful in the operation or maintenance of the project and located within the project boundary, all portable property that may be employed in connection with the project, located within or outside the project boundary, as approved by the Commission, and all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) Exhibits J, L, M, and R designated in ordering paragraph (B) above are approved and made a part of the license. Exhibit K is approved to the extent that it shows the general location and nature of the project.

(D) The application for approval of Exhibits J and K filed on October 18, 1976, is dismissed.

(E) This license is also subject to the terms and conditions set forth in Form L-5 (revised October, 1975), entitled "Terms and Conditions of License for Constructed Major Project Affecting Navigable Waters and Lands of the United States," attached to and made part of this license. The license is also subject to the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges, effective the first day of the month in which this license is issued:

(a) For the purpose of reimbursing the United States for the cost of administration of Part I of the FPA, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The authorized installed capacity for that purpose is 830,000 horsepower.

(b) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of its lands other than for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time. The acreage of those lands is tentatively set at 33.53 acres. The Commission reserves the right to adjust this figure at a later date.

(c) For the purpose of recompensing the United States for the use, occupancy, and enjoyment of 0.07 acre of its

lands for transmission line right-of-way, a reasonable amount as determined in accordance with the provisions of the Commission's regulations in effect from time to time.

Article 301. The licensee shall carry out the recommendations for testing and monitoring of the project structures and equipment as set forth in the final report by the Board of Consultants dated May 15, 1980.

Article 302. Within one year from the date of issuance of this order, the licensee shall file for approval revised Exhibit G conforming to the Commission's regulations showing the Rock Island Project No. 943 as constructed.

Article 401. The licensee shall implement the fisheries protection measures outlined in the Sections B through F of the settlement agreement filed with the Commission on May 4, 1987, according to the schedule outlined in the agreement. Further, the licensee shall do the following: (1) notify the Commission's Office of Hydropower Licensing and Portland Regional Office of all meetings of the Rock Island Coordinating Committee; (2) file an annual report not later than January 31 of each year outlining accomplishments of the previous calendar year and a schedule of projected accomplishments for the next year; and (3) file results of all studies and testing with the Commission.

Article 402. The licensee, after consultation with the U.S. Fish and Wildlife Service, National Marine Fisheries Service, Washington Departments of Fisheries and Wildlife, Oregon Department of Fish and Wildlife, Confederated Tribes and Bands of the Yakima Indian Nation, Confederated Tribes of the Colville Reservation, and Confederated Tribes of the Umatilla Indian Reservation, shall develop functional design drawings of any juvenile fish bypass systems, fish hatcheries or satellite facilities, or fish ladder modifications that may result from implementation of the settlement agreement filed with the Commission on May 4, 1987. The licensee shall file the design drawings for Commission approval at least 90 days prior to the start of construction or modification of any bypass systems, hatcheries, or fish ladders. The Commission reserves the right to require modifications to the functional design drawings. The licensee shall not start construction of the fish protection facilities until the drawings are approved by the Commission. The licensee shall file as-built drawings with the Commission within 6 months after completion of construction or modification of any bypass systems, hatcheries, or fish ladders.

Article 403. The licensee, after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Wildlife, and within 1 year from the date of issuance of this license, shall file for Commission approval a wildlife management

plan for the 1,000-acre Water District Lands located west of the city of Wenatchee. The plan shall include: (1) the location of all enhancement opportunities for areas under consideration for mitigation or enhancement; (2) a detailed description of site-specific mitigation or enhancement measures to provide maximum replacement of riparian wildlife habitats; (3) an outline of mitigation/enhancement goals and specific plans for any studies or monitoring programs needed to achieve these goals; (4) an implementation schedule; and (5) provisions for monitoring the success of the mitigative and enhancement measures. Agency comments shall be included with the filing. The Commission reserves the right to require modifications to the plan.

Article 404. The licensee, in order to protect bald eagles at the project, shall: (1) restrict heavy construction (earth-moving, ditching, pile-driving, etc.) at the Wenatchee River Confluence recreational sites from December 1 to March 1; (2) relocate the shoreline hiking trails at the Wenatchee River south bank site a significant distance from eagle perch trees; and (3) avoid the removal of large trees and snags along the perimeter of the reservoir. Within 1 year from the date of issuance of this license, the licensee, after consultation with the U.S. Fish and Wildlife Service, Washington Department of Wildlife, National Park Service, Washington Parks and Recreation Commission, and Washington Interagency Committee on Outdoor Recreation, shall file for Commission approval design drawings of the relocated hiking trails and agency comments of the drawings. The Commission reserves the right to require modifications to the drawings.

Article 405. The licensee, after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Wildlife, shall develop a plan to monitor the effect on the bald eagle of recreational use of project lands and waters, including hiking, boating, and fishing. Within 1 year from the date of issuance of this license, the licensee shall file for Commission approval a copy of a monitoring plan, comments from the above-mentioned agencies on the adequacy of the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results of the monitoring shall be submitted to the Commission according to the approved schedule, with the comments from the consulted agencies relating to the results. If the results of the monitoring indicate that additional measures are necessary to protect and enhance the bald eagle population, the licensee shall file, for Commission approval, a schedule for implementing such measures, along with any comments from the above-mentioned agencies on the recommended measures. At the same time, copies of the schedule shall be served upon the agencies consulted.

Article 406. The licensee, after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Wildlife, shall develop a plan to monitor the degree of mortality of goslings from operation of the project for a period of 5 years. Within 1 year from the date of issuance of this license, the licensee shall file for Commission approval a copy of a monitoring plan, comments from the above-mentioned agencies on the adequacy of the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results of the monitoring shall be submitted to the Commission according to the approved schedule, with the comments from the consulted agencies relating to the results. If the results of the monitoring indicate that measures are necessary to protect and enhance the Canada goose population, the licensee shall provide, for Commission approval, a schedule for implementing the measures, along with any comments from the above-mentioned agencies on the recommended measures. At the same time, copies of the schedule shall be served upon the agencies consulted. The Commission reserves the right to require measures to protect and enhance the Canada goose population.

Article 407. The licensee, after consultation with the U.S. Fish and Wildlife Service and the Washington Department of Wildlife, shall develop a plan to monitor the use of wood duck nest boxes installed at the project. Within 1 year from the date of issuance of this license, the licensee shall file for Commission approval a copy of a monitoring plan, comments from the above-mentioned agencies on the adequacy of the plan, and a schedule for filing the results of the monitoring program. The Commission reserves the right to require modifications to the plan and the schedule.

The results for the monitoring shall be submitted to the Commission according to the approved schedule, with the comments from the consulted agencies relating to the results. If the results of the monitoring indicate that measures are necessary to protect and enhance the wood duck population, the licensee shall provide, for Commission approval, a schedule for implementing the measures, along with any comments from the above-mentioned agencies on the recommended measures. At the same time, copies of the schedule shall be served upon the agencies consulted. The Commission reserves the right to require measures to protect and enhance the wood duck population.

Article 408. The licensee, within 6 months from the date of issuance of the license, shall file the results of a survey of all areas proposed to be disturbed by recreational development or by project operation and maintenance (such as the transmission line

rights-of-way and recreational sites) to determine the location of any rare and sensitive plant species. The plant survey shall be conducted by a qualified botanist during the flowering period. The licensee shall provide for a review of this survey by the U.S. Fish and Wildlife Service and the Washington Department of Wildlife.

If the results of the survey indicate that a rare or sensitive species would be adversely affected, the licensee shall file for Commission approval a mitigative plan to protect the affected species developed after consultation with the resource agencies. Agency comments shall be included in the filing. The Commission reserves the right to require changes to the plan.

Article 409. The licensee, after consultation with the Washington State Historic Preservation Officer (SHPO), the Colville Tribes (Tribes), and the Advisory Council on Historic Preservation (Council), shall complete and implement its cultural resources management plan prepared to avoid and mitigate impacts to archeological sites in the project vicinity listed or eligible for inclusion in the National Register of Historic Places. Within 1 year after the date of issuance of this license, the licensee shall file for Commission approval: (1) a copy of this plan, and (2) either copies of letters from the SHPO, the Tribes, and the Council, or an agreement signed by the licensee, the SHPO, the Tribes, and the Council, indicating that the plan is acceptable and will be implemented in a satisfactory manner. The plan shall adhere to the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation. To ensure that the plan is implemented in a satisfactory manner, the licensee shall, within 3 years after the date of issuance of this license, file a report containing: (1) the status and results of cultural resources investigations identified in the plan to avoid, mitigate, and/or monitor the potential for impacts of archeological sites listed or eligible for inclusion in the National Register of Historic Places that are located in the vicinity of the project; (2) any necessary revisions to the plan based on these investigations; and (3) copies of letters from the SHPO, the Tribes, and the Council commenting on the acceptability of the report. The Commission reserves the right to require changes to the plan. The licensee shall make funds available in a reasonable amount for implementation of the plan. If the licensee, the SHPO, the Tribes, and the Council cannot agree on the amount of money to be spent for implementation of the plan, the Commission reserves the right to require the licensee to conduct the necessary work at the licensee's own expense.

Article 410. The licensee, before starting any land-clearing or land-disturbing activities within the project boundaries, other than those specifically authorized in this license, shall consult with the Washington State Historic Preservation Officer (SHPO) and Colville Tribes (Tribes) and shall file for Commission approval a

cultural resources management plan, prepared by a qualified cultural resources specialist. If the licensee discovers any previously unidentified archeological or historic sites during the course of construction or development of project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the sites, shall consult with the SHPO and the Tribes, and shall file for Commission approval a new cultural resources management plan, prepared by a qualified cultural resources management specialist.

Either management plan shall include the following: (1) a description of each discovered site, indicating whether it is listed or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered site; (3) proposed measures for avoiding or mitigating the effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a site discovered during construction, until informed by the Commission that the requirements of this article have been fulfilled.

Article 411. The Commission reserves the authority to order, upon its own motion or upon the recommendation of federal and state fish and wildlife agencies, affected Indian Tribes, and the Northwest Power Planning Council, alterations of project structures and operation to take into account to the fullest extent practicable the regional fish and wildlife program developed and amended pursuant to the Pacific Northwest Electric Power Planning and Conservation Act.

Article 412. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain other types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the uses and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with, the covenants of the instrument of conveyance for any interests that it has conveyed under this article. If a permitted use and occupancy violates any conditions of this article or any other condition

Project No. 943-002
Docket No. E-9569-000

-37-

imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, cancelling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The types of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the uses and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modifications of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been contained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines; (6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone

Project No. 943-002
Docket No. E-9569-000

-38-

distribution cables or major electric distribution lines (69-kV or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. Not later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for: (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained; (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certificates or permits have been obtained; (3) other pipelines that cross project lands or waters but do not discharge into project waters; (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained; (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina; (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and (7) other uses, if: (i) the amount of land conveyed for a particular use is five acres or less; (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d) (7) in any calendar year. At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must file a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked Exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires that licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraphs (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation

agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved Exhibit R or approved report on recreational resources of an Exhibit E; or, if the project does not have an approved Exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to ensure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised Exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude land conveyed under this article from the project shall be consolidated for consideration when revised Exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

(F) The settlement agreement filed in this proceeding on May 4, 1987, is approved and made a part of the license for Project No. 943.

(G) The Commission approval of the settlement agreement shall not constitute approval of, or precedent regarding, any principle or issue in these or any other proceedings.

(H) The exceptions taken to the initial decision issued January 31, 1986, in this proceeding are dismissed.

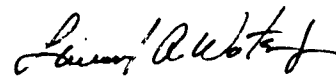
(I) (1) Whenever a violation of the settlement agreement occurs, the licensee shall, within 30 days of the occurrence, file with the Commission, and send a copy to the Regional Office, a report containing an explanation of the circumstances surrounding the violation and the licensee's plan to avoid any repetition thereof.

(2) Whenever a dispute arises under Section A.6 of the settlement agreement that is resolved without referral to the Commission, the licensee shall, within 30 days, file with the Commission, and send a copy to the Regional Office, a report containing an explanation of the dispute and the nature of the resolution.

(J) This order is final unless a request for rehearing is filed within 30 days from the date its issuance, as provided in Section 313(a) of the FPA. The filing of a request for rehearing does not operate as a stay of the effective date of this order or of any other date specified in this order, except as specifically ordered by the Commission. The licensee's failure to file a request for rehearing shall constitute acceptance of the order.

By the Commission.

(S E A L)


Linwood A. Watson, Jr.,
Acting Secretary.

FEDERAL ENERGY REGULATORY COMMISSION

TERMS AND CONDITIONS OF LICENSE FOR CONSTRUCTED
MAJOR PROJECT AFFECTING NAVIGABLE WATERS
AND LANDS OF THE UNITED STATES

Article 1. The entire project, as described in this order of the Commission, shall be subject to all of the provisions, terms, and conditions of the license.

Article 2. No substantial change shall be made in the maps, plans, specifications, and statements described and designated as exhibits and approved by the Commission in its order as a part of the license until such change shall have been approved by the Commission: Provided, however, That if the Licensee or the Commission deems it necessary or desirable that said approved exhibits, or any of them, be changed, there shall be submitted to the Commission for approval a revised, or additional exhibit or exhibits covering the proposed changes which, upon approval by the Commission, shall become a part of the license and shall supersede, in whole or in part, such exhibit or exhibits theretofore made a part of the license as may be specified by the Commission.

Article 3. The project area and project works shall be in substantial conformity with the approved exhibits referred to in Article 2 herein or as changed in accordance with the provisions of said article. Except when emergency shall require for the protection of navigation, life, health, or property, there shall not be made without prior approval of the Commission any substantial alteration or addition not in conformity with the approved plans to any dam or other project works under the license or any substantial use of project lands and waters not authorized herein; and any emergency alteration, addition, or use so made shall thereafter be subject to such modification and change as the Commission may direct. Minor changes in project works, or in uses of project lands and waters, or divergence from such approved exhibits may be made if such changes will not result in a decrease in efficiency, in a material increase in cost, in an adverse environmental impact, or in impairment of the general scheme of development; but any of such minor changes made without the prior approval of the Commission, which in its judgment have produced or will produce any of such results, shall be subject to such alteration as the Commission may direct.

Article 4. The project, including its operation and maintenance and any work incidental to additions or alterations authorized by the Commission, whether or not conducted upon lands of the United States, shall be subject to the inspection and supervision of the Regional Engineer, of the Commission, in the region wherein the project is located, or of such other officer or agent as the Commission may designate, who shall be the authorized representative of the Commission for such purposes. The Licensee shall cooperate fully with said representative and shall furnish him such information as he may require concerning the operation and maintenance of the project, and any such alterations thereto, and shall notify him of the date upon which work with respect to any alteration will begin, as far in advance thereof as said representative may reasonably specify, and shall notify him promptly in writing of any suspension of work for a period of more than one week, and of its resumption and completion. The Licensee shall submit to said representative a detailed program of inspection by the Licensee that will provide for an adequate and qualified inspection force for construction of any such alterations to the project. Construction of said alterations or any feature thereof shall not be initiated until the program of inspection for the alterations or any feature thereof has been approved by said representative. The Licensee shall allow said representative and other officers or employees of the United States, showing proper credentials, free and unrestricted access to, through, and across the project lands and project works in the performance of their official duties. The Licensee shall comply with such rules and regulations of general or special applicability as the Commission may prescribe from time to time for the protection of life, health, or property.

Article 5. The Licensee, within five years from the date of issuance of the license, shall acquire title in fee or the right to use in perpetuity all lands, other than lands of the United States, necessary or appropriate for the construction, maintenance, and operation of the project. The Licensee or its successors and assigns shall, during the period of the license, retain the possession of all project property covered by the license as issued or as later amended, including the project area, the project works, and all franchises, easements, water rights, and rights of occupancy and use; and none of such properties shall be voluntarily sold, leased, transferred, abandoned, or otherwise disposed of without the prior written approval of the Commission, except that the Licensee may lease

or otherwise dispose of interests in project lands or property without specific written approval of the Commission pursuant to the then current regulations of the Commission. The provisions of this article are not intended to prevent the abandonment or the retirement from service of structures, equipment, or other project works in connection with replacements thereof when they become obsolete, inadequate, or inefficient for further service due to wear and tear; and mortgage or trust deeds or judicial sales made thereunder, or tax sales, shall not be deemed voluntary transfers within the meaning of this article.

Article 6. In the event the project is taken over by the United States upon the termination of the license as provided in Section 14 of the Federal Power Act, or is transferred to a new licensee or to a non-power licensee under the provisions of Section 15 of said Act, the Licensee, its successors and assigns shall be responsible for, and shall make good any defect of title to, or of right of occupancy and use in, any of such project property that is necessary or appropriate or valuable and serviceable in the maintenance and operation of the project, and shall pay and discharge, or shall assume responsibility for payment and discharge of, all liens or encumbrances upon the project or project property created by the Licensee or created or incurred after the issuance of the license: Provided, That the provisions of this article are not intended to require the Licensee, for the purpose of transferring the project to the United States or to a new licensee, to acquire any different title to, or right of occupancy and use in, any of such project property than was necessary to acquire for its own purposes as the Licensee.

Article 7. The actual legitimate original cost of the project, and of any addition thereto or betterment thereof, shall be determined by the Commission in accordance with the Federal Power Act and the Commission's Rules and Regulations thereunder.

Article 8. The Licensee shall install and thereafter maintain gages and stream-gaging stations for the purpose of determining the stage and flow of the stream or streams on which the project is located, the amount of water held in and withdrawn from storage, and the effective head on the turbines; shall provide for the required reading of such gages and for the adequate rating of such stations; and shall install and maintain standard meters adequate for the determination of the amount of electric energy generated

by the project works. The number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, shall at all times be satisfactory to the Commission or its authorized representative. The Commission reserves the right, after notice and opportunity for hearing, to require such alterations in the number, character, and location of gages, meters, or other measuring devices, and the method of operation thereof, as are necessary to secure adequate determinations. The installation of gages, the rating of said stream or streams, and the determination of the flow thereof, shall be under the supervision of, or in cooperation with, the District Engineer of the United States Geological Survey having charge of stream-gaging operations in the region of the project, and the Licensee shall advance to the United States Geological Survey the amount of funds estimated to be necessary for such supervision, or cooperation for such periods as may be mutually agreed upon. The Licensee shall keep accurate and sufficient records of the foregoing determinations to the satisfaction of the Commission, and shall make return of such records annually at such time and in such form as the Commission may prescribe.

Article 9. The Licensee shall, after notice and opportunity for hearing, install additional capacity or make other changes in the project as directed by the Commission, to the extent that it is economically sound and in the public interest to do so.

Article 10. The Licensee shall, after notice and opportunity for hearing, coordinate the operation of the project, electrically and hydraulically, with such other projects or power systems and in such manner as the Commission may direct in the interest of power and other beneficial public uses of water resources, and on such conditions concerning the equitable sharing of benefits by the Licensee as the Commission may order.

Article 11. Whenever the Licensee is directly benefited by the construction work of another licensee, a permittee, or the United States on a storage reservoir or other headwater improvement, the Licensee shall reimburse the owner of the headwater improvement for such part of the annual charges for interest, maintenance, and depreciation thereof as the Commission shall determine to be equitable, and shall pay to the United States the cost of making such

determination as fixed by the Commission. For benefits provided by a storage reservoir or other headwater improvement of the United States, the Licensee shall pay to the Commission the amounts for which it is billed from time to time for such headwater benefits and for the cost of making the determinations pursuant to the then current regulations of the Commission under the Federal Power Act.

Article 12. The United States specifically retains and safeguards the right to use water in such amount, to be determined by the Secretary of the Army, as may be necessary for the purposes of navigation on the navigable waterway affected; and the operations of the Licensee, so far as they affect the use, storage and discharge from storage of waters affected by the license, shall at all times be controlled by such reasonable rules and regulations as the Secretary of the Army may prescribe in the interest of navigation, and as the Commission may prescribe for the protection of life, health, and property, and in the interest of the fullest practicable conservation and utilization of such waters for power purposes and for other beneficial public uses, including recreational purposes, and the Licensee shall release water from the project reservoir at such rate in cubic feet per second, or such volume in acre-feet per specified period of time, as the Secretary of the Army may prescribe in the interest of navigation, or as the Commission may prescribe for the other purposes hereinbefore mentioned.

Article 13. On the application of any person, association, corporation, Federal agency, State or municipality, the Licensee shall permit such reasonable use of its reservoir or other project properties, including works, lands and water rights, or parts thereof, as may be ordered by the Commission, after notice and opportunity for hearing, in the interests of comprehensive development of the waterway or waterways involved and the conservation and utilization of the water resources of the region for water supply or for the purposes of steam-electric, irrigation, industrial, municipal or similar uses. The Licensee shall receive reasonable compensation for use of its reservoir or other project properties or parts thereof for such purposes, to include at least full reimbursement for any damages or expenses which the joint use causes the Licensee to incur. Any such

compensation shall be fixed by the Commission either by approval of an agreement between the Licensee and the party or parties benefiting or after notice and opportunity for hearing. Applications shall contain information in sufficient detail to afford a full understanding of the proposed use, including satisfactory evidence that the applicant possesses necessary water rights pursuant to applicable State law, or a showing of cause why such evidence cannot concurrently be submitted, and a statement as to the relationship of the proposed use to any State or municipal plans or orders which may have been adopted with respect to the use of such waters.

Article 14. In the construction or maintenance of the project works, the Licensee shall place and maintain suitable structures and devices to reduce to a reasonable degree the liability of contact between its transmission lines and telegraph, telephone and other signal wires or power transmission lines constructed prior to its transmission lines and not owned by the Licensee, and shall also place and maintain suitable structures and devices to reduce to a reasonable degree the liability of any structures or wires falling or obstructing traffic or endangering life. None of the provisions of this article are intended to relieve the Licensee from any responsibility or requirement which may be imposed by any other lawful authority for avoiding or eliminating inductive interference.

Article 15. The Licensee shall, for the conservation and development of fish and wildlife resources, construct, maintain, and operate, or arrange for the construction, maintenance, and operation of such reasonable facilities, and comply with such reasonable modifications of the project structures and operation, as may be ordered by the Commission upon its own motion or upon the recommendation of the Secretary of the Interior or the fish and wildlife agency or agencies of any State in which the project or a part thereof is located, after notice and opportunity for hearing.

Article 16. Whenever the United States shall desire, in connection with the project, to construct fish and wildlife facilities or to improve the existing fish and wildlife facilities at its own expense, the Licensee shall permit the United States or its designated agency to use, free of cost, such of the Licensee's lands and interests as lands, reservoirs, waterways and project works as may be

reasonably required to complete such facilities or such improvements thereof. In addition, after notice and opportunity for hearing, the Licensee shall modify the project operation as may be reasonably prescribed by the Commission in order to permit the maintenance and operation of the fish and wildlife facilities constructed or improved by the United States under the provisions of this article. This article shall not be interpreted to place any obligation on the United States to construct or improve fish and wildlife facilities or to relieve the Licensee of any obligation under this license.

Article 17. The Licensee shall construct, maintain, and operate, or shall arrange for the construction, maintenance, and operation of such reasonable recreational facilities, including modifications thereto, such as access roads, wharves, launching ramps, beaches, picnic and camping areas, sanitary facilities, and utilities, giving consideration to the needs of the physically handicapped, and shall comply with such reasonable modifications of the project, as may be prescribed hereafter by the Commission during the term of this license upon its own motion or upon the recommendation of the Secretary of the Interior or other interested Federal or State agencies, after notice and opportunity for hearing.

Article 18. So far as is consistent with proper operation of the project, the Licensee shall allow the public free access, to a reasonable extent, to project waters and adjacent project lands owned by the Licensee for the purpose of full public utilization of such lands and waters for navigation and for outdoor recreational purposes, including fishing and hunting: Provided, That the Licensee may reserve from public access such portions of the project waters, adjacent lands, and project facilities as may be necessary for the protection of life, health, and property.

Article 19. In the construction, maintenance, or operation of the project, the Licensee shall be responsible for, and shall take reasonable measures to prevent, soil erosion on lands adjacent to streams or other waters, stream sedimentation, and any form of water or air pollution. The Commission, upon request or upon its own motion, may order the Licensee to take such measures as the Commission finds to be necessary for these purposes, after notice and opportunity for hearing.

Article 20. The Licensee shall clear and keep clear to an adequate width lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which results from the clearing of lands or from the maintenance or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of the lands and disposal of the unnecessary material shall be done with due diligence and to the satisfaction of the authorized representative of the Commission and in accordance with appropriate Federal, State, and local statutes and regulations.

Article 21. Material may be dredged or excavated from, or placed as fill in, project lands and/or waters only in the prosecution of work specifically authorized under the license; in the maintenance of the project; or after obtaining Commission approval, as appropriate. Any such material shall be removed and/or deposited in such manner as to reasonably preserve the environmental values of the project and so as not to interfere with traffic on land or water. Dredging and filling in a navigable water of the United States shall also be done to the satisfaction of the District Engineer, Department of the Army, in charge of the locality.

Article 22. Whenever the United States shall desire to construct, complete, or improve navigation facilities in connection with the project, the Licensee shall convey to the United States, free of cost, such of its lands and rights-of-way and such rights of passage through its dams or other structures, and shall permit such control of its pools, as may be required to complete and maintain such navigation facilities.

Article 23. The operation of any navigation facilities which may be constructed as a part of, or in connection with, any dam or diversion structure constituting a part of the project works shall at all times be controlled by such reasonable rules and regulations in the interest of navigation, including control of the level of the pool caused by such dam or diversion structure, as may be made from time to time by the Secretary of the Army.

Article 24. The Licensee shall furnish power free of cost to the United States for the operation and maintenance of navigation facilities in the vicinity of the project at the voltage and frequency required by such facilities and at a point adjacent thereto, whether said facilities are constructed by the Licensee or by the United States.

Article 25. The Licensee shall construct, maintain, and operate at its own expense such lights and other signals for the protection of navigation as may be directed by the Secretary of the Department in which the Coast Guard is operating.

Article 26. Timber on lands of the United States cut, used, or destroyed in the construction and maintenance of the project works, or in the clearing of said lands, shall be paid for, and the resulting slash and debris disposed of, in accordance with the requirements of the agency of the United States having jurisdiction over said lands. Payment for merchantable timber shall be at current stumpage rates, and payment for young growth timber below merchantable size shall be at current damage appraisal values. However, the agency of the United States having jurisdiction may sell or dispose of the merchantable timber to others than the Licensee: Provided, That timber so sold or disposed of shall be cut and removed from the area prior to, or without undue interference with, clearing operations of the Licensee and in coordination with the Licensee's project construction schedules. Such sale or disposal to others shall not relieve the Licensee of responsibility for the clearing and disposal of all slash and debris from project lands.

Article 27. The Licensee shall do everything reasonably within its power, and shall require its employees, contractors, and employees of contractors to do everything reasonably within their power, both independently and upon the request of officers of the agency concerned, to prevent, to make advance preparations for suppression of, and to suppress fires on the lands to be occupied or used under the license. The Licensee shall be liable for and shall pay the costs incurred by the United States in suppressing fires caused from the construction, operation, or maintenance of the project works or of the works appurtenant or accessory thereto under the license.

Article 28. The Licensee shall interpose no objection to, and shall in no way prevent, the use by the agency of the United States having jurisdiction over the lands of the United States affected, or by persons or corporations occupying lands of the United States under permit, of water for fire suppression from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license, or the use by said parties of water for sanitary and domestic purposes from any stream, conduit, or body of water, natural or artificial, used by the Licensee in the operation of the project works covered by the license.

Article 29. The Licensee shall be liable for injury to, or destruction of, any buildings, bridges, roads, trails, lands, or other property of the United States, occasioned by the construction, maintenance, or operation of the project works or of the works appurtenant or accessory thereto under the license. Arrangements to meet such liability, either by compensation for such injury or destruction, or by reconstruction or repair of damaged property, or otherwise, shall be made with the appropriate department or agency of the United States.

Article 30. The Licensee shall allow any agency of the United States, without charge, to construct or permit to be constructed on, through, and across those project lands which are lands of the United States such conduits, chutes, ditches, railroads, roads, trails, telephone and power lines, and other routes or means of transportation and communication as are not inconsistent with the enjoyment of said lands by the Licensee for the purposes of the license. This license shall not be construed as conferring upon the Licensee any right of use, occupancy, or enjoyment of the lands of the United States other than for the construction, operation, and maintenance of the project as stated in the license.

Article 31. In the construction and maintenance of the project, the location and standards of roads and trails on lands of the United States and other uses of lands of the United States, including the location and condition of quarries, borrow pits, and spoil disposal areas, shall be subject to the approval of the department or agency of the United States having supervision over the lands involved.

Article 32. The Licensee shall make provision, or shall bear the reasonable cost, as determined by the agency of the United States affected, of making provision for avoiding inductive interference between any project transmission line or other project facility constructed, operated, or maintained under the license, and any radio installation, telephone line, or other communication facility installed or constructed before or after construction of such project transmission line or other project facility and owned, operated, or used by such agency of the United States in administering the lands under its jurisdiction.

Article 33. The Licensee shall make use of the Commission's guidelines and other recognized guidelines for treatment of transmission line rights-of-way, and shall clear such portions of transmission line rights-of-way across lands of the United States as are designated by the officer of the United States in charge of the lands; shall keep the areas so designated clear of new growth, all refuse, and inflammable material to the satisfaction of such officer; shall trim all branches of trees in contact with or liable to contact the transmission lines; shall cut and remove all dead or leaning trees which might fall in contact with the transmission lines; and shall take such other precautions against fire as may be required by such officer. No fires for the burning of waste material shall be set except with the prior written consent of the officer of the United States in charge of the lands as to time and place.

Article 34. The Licensee shall cooperate with the United States in the disposal by the United States, under the Act of July 31, 1947, 61 Stat. 681, as amended (30 U.S.C. sec. 601, et seq.), of mineral and vegetative materials from lands of the United States occupied by the project or any part thereof: Provided, That such disposal has been authorized by the Commission and that it does not unreasonably interfere with the occupancy of such lands by the Licensee for the purposes of the license: Provided further, That in the event of disagreement, any question of unreasonable interference shall be determined by the Commission after notice and opportunity for hearing.

Article 35. If the Licensee shall cause or suffer essential project property to be removed or destroyed or to become unfit for use, without adequate replacement, or shall abandon or discontinue good faith operation of the project or refuse or neglect to comply with the terms of the license and the lawful orders of the Commission mailed to the record address of the Licensee or its agent, the Commission will deem it to be the intent of the Licensee to surrender the license. The Commission, after notice and opportunity for hearing, may require the Licensee to remove any or all structures, equipment and power lines within the project boundary and to take any such other action necessary to restore the project waters, lands, and facilities remaining within the project boundary to a condition satisfactory to the United States agency having jurisdiction over its lands or the Commission's authorized representative, as appropriate, or to provide for the continued operation and maintenance of nonpower facilities and fulfill such other obligations under the license as the Commission may prescribe. In addition, the Commission in its discretion, after notice and opportunity for hearing, may also agree to the surrender of the license when the Commission, for the reasons recited herein, deems it to be the intent of the Licensee to surrender the license.

Article 36. The right of the Licensee and of its successors and assigns to use or occupy waters over which the United States has jurisdiction, or lands of the United States under the license, for the purpose of maintaining the project works or otherwise, shall absolutely cease at the end of the license period, unless the Licensee has obtained a new license pursuant to the then existing laws and regulations, or an annual license under the terms and conditions of this license.

Article 37. The terms and conditions expressly set forth in the license shall not be construed as impairing any terms and conditions of the Federal Power Act which are not expressly set forth herein.

FEBRUARY 17, 1988

FISH AND WILDLIFE MITIGATION AGREEMENT

This agreement is made between the Chelan County Public Utility District (the District) and the Washington State Department of Wildlife (WDW). This is a real covenant entered into so as to bind the parties, assignees, or purchasers.

Chelan County Public Utility District No. 1 is obligated under the terms of its Federal Energy Regulatory Commission (FERC) licenses for the Rock Island and Rocky Reach Hydroelectric Projects to develop a series of public parks on the Columbia River. Plans for these parks were filed under Exhibit R of the then applicable FERC regulations and are frequently called the Exhibit R for that reason. By constructing these facilities to accommodate public access to an use of the river and adjoining shorelands, certain benefits and losses to existing wetland and shoreline habitat areas result.

WDW is responsible under the laws of the State of Washington (Title 77 RCW) to preserve, protect, and perpetuate wildlife, including those fish species not classed as game fish (RCW 75). Through this agreement, the WDW also implements its responsibility under the Federal Power Act and the Fish and Wildlife Coordination Act, 16 USC section 661 et. seq.

The District is sensitive to fish and wildlife impacts associated with development and operation of these parks. Nonetheless, there are site features at the parks that require modifications to achieve recreation use objectives. These modifications in some cases encroach upon fish and/or wildlife habitat. This plan has been developed to address these habitat encroachments.

The plan describes mitigation measures to compensate for lost fish and wildlife habitat that will occur as the result of the development of the following parks on the Columbia and Wenatchee Rivers: Douglas County Park Phase II, Walla Walla Point Park, North and South Wenatchee River Confluence Parks, and Daroga Park. A locator map for these parks is provided with the appendices.

The accuracy with which fish and wildlife benefits and losses attributed to park development may be quantified is limited. In fact, it is not always possible to specifically determine whether certain actions will have a positive or negative effect on micro habitats. Park development cannot bear the high cost of such studies nor the time delays that would result. Consequently, the District presents this plan to compensate for any adverse fish and wildlife effects of park development. The proposed park projects and subsequent mitigation plan are described below.

DESCRIPTION OF PARK DEVELOPMENT ACTIVITY

DOUGLAS COUNTY PARK PHASE II

Park plans propose the conversion of approximately 60 acres of orchard land containing three residences into a day use park. Recreational facilities include a swim beach, shoreline trail, day use/picnic area, athletic fields, and support facilities. Shoreline construction involves 10 pilings to support floating rope-type barriers in the swim area, riprap type shoreline protection,

and a shoreline trail link requiring the placement of fill extending up to feet waterward of ordinary high water for a linear distance of approximately 750 feet. The trail will connect phase I and phase II of the park. Alternatives to filling to provide a pedestrian link have been evaluated and shortcomings of these alternatives have led the District to select the alternative. The trail would result in the covering of .3 acre of a shallow terraced shoreline edge that is generally wet, but is periodically unwat both seasonally and on a daily basis when lower flows occur in the Colur River.

WALLA WALLA POINT PARK

This park proposes the conversion of orchard and undeveloped area filled with rubble and construction debris into a 36 acre park. The most easily recognized feature in the park area is the point and embayment created by past excavation and fills. The majority of the shoreline area throughout the site has been severely abused by man. Recreational facilities will include a swim beach, day use/picnic areas, athletic fields, riverfront trail, and support facilities.

Shoreline construction involves the creation of a swim beach within the embayment, breaching the point in one location to enhance water circulation, the swim beach within the embayment, and limited areas of riprap shoreline protection. Development of the swim area will result in the filling of approximately 1.1 acres of wetland within two connected depressions previously rough excavated and lined with construction debris. The steep unconsolidated embankment makes public access to the shoreline impossible. Beach sands will be placed below ordinary high water in the immediate area designated for swimming. The breaching of the point will create approximately 0.08 acre of wetland and provide for increased water flows within the embayment which will improve the habitat for fish and wildlife.

NORTH AND SOUTH CONFLUENCE PARKS

Park plans propose the creation of an area primarily devoted to wildlife preservation on the south side of the Wenatchee River at its confluence with the Columbia; and the development of a regional park outside the riparian area on the north side of the Wenatchee River. A total of 46 acres in these sites will be developed. South side recreation facilities include a non-hard surfaced trail through the area, interpretive information and viewing areas, a hard surfaced pedestrian trail along a terrace overlooking the site, and support facilities. A pedestrian bridge is proposed across the Wenatchee River to join the trail system between parks.

The north side will provide RV and tent camping, day use/picnic areas, playgrounds, swim area, boat launching, and support facilities. Shoreline construction involves 3 concrete footings in the Wenatchee River for a pedestrian bridge. Also, the development of a small swimming cove and boat launch basin on the Columbia River creating approximately 0.65 acre and 0.1 acre of new wetland area respectively.

DAROGA PARK

Park plans propose the conversion of orchard, a previously developed pr
resort including several man-made lagoons, an off-road vehicle track
undevelopable steep slopes, into a regional park. Many of the lagoon
shoreline features were constructed by the land owner prior to the raisin
the Rocky Reach reservoir. The developed park will be 90 acres in size
will encompass 1.5 miles of Columbia River shoreline. Recreational facil
include RV and tent camping, day use/picnic area, group use area, playfi
athletic court, swim beach, boat launching, short-term boat moorage,
pedestrian trail.

Shoreline construction involves the filling of the previous swim lagoon loc
adjacent to the Daroga embayment on the Columbia River. Grading and dred
of the new swim area on the embayment will require the removal of
intervening upland area between the new and old swim area. Under a cont
with the District, Washington State University conducted a water quality s
at Daroga Park and determined that the relocation of the swim area
necessary to achieve a water exchange rate that meets public health standa
The filling of the old swim lagoon will result in the loss of 1.1 acre
wetland and the development of the new swim area will replace 0.4 acr
wetland. Dredging within the swim area and the placement of beach sands
create additional shallow wetlands. Additional shoreline modifications w
should have a minimal impact on fish and wildlife will occur as a resul
development of the boat launch, day use dock, windsurf beach, peninsula, is
boat dock, and the placement of riprap.

A large lagoon separated from the Columbia River by a causeway was evaluate
the WSU study and found to have relatively low water quality. A single sha
connection was breached through the causeway by the landowner some years ag
attempt to increase circulation. WSU's study concluded that this opening
still insufficient. To enhance water quality in this lagoon, the sha
opening will be dredged deeper and a second opening will be created near
downstream end. Two 60 inch culverts will be placed in each opening.
breaching the causeway with culverts, a pedestrian trail will be able to c
to link the north and south ends of the park, as well as to provide acces
the boat camping area on the small "Island" where the causeways join. The
boundary runs through the large lagoon. To separate adjoining priv
properties from the public use area, up to 18 piling will be driven in
lagoon to support a rope-type floating barrier.

The fishery value of the lagoon is unknown. The new cove-shaped swim be
will create additional shallow calm wetland area to replace a portion of
lost lagoon area. With respect to the large lagoon, the effects of creat
some additional circulation are also unknown, but it is generally agreed
this action will be beneficial.

Fish and Wildlife Mitigation Plan

January 26, 1988

CUMULATIVE PARK CONSTRUCTION IMPACTS

Although a great deal is now known about salmonid behavior and habitat needs, the relative value of the fish micro habitats in the proposed parks cannot be predicted. Strictly in terms of wetlands, the park sites addressed in this mitigation plan will reduce water surface by 3.05 acres. At the same time, excavations will create 1.38 acres of new water surface, resulting in a net loss in water surface of 1.67 acres.

PROPOSED MITIGATION

The mitigation plan proposes to significantly enhance summer rearing habitat for zero age chinook salmonids and resting areas for migrating juvenile salmonids as compensation for lost wetlands. The proposal provides for the joining together of several back water channels and a 3.58 acre pond. The joining of the channels would directly increase wetland area by .3 acre. The interconnecting channel also opens approximately 1.5 acres of back channel not previously utilized by migrating juvenile salmonids. The total area of useable new and/or improved fish habitat provided in this plan is 5.38 acres.

Wildlife benefits will occur as a result of the channelization. The proposal will provide for 900 to 1,000 feet of new shoreline edge and the conversion of several peninsulas into islands totaling approximately 6 acres in size. Creation of the islands will increase the value of the existing habitat for wildlife by reducing access to the areas by humans and some predators. To ensure that the newly created channels provide this isolation and the expected resultant benefits, the channel widths will be at least 15 feet wide and 3 feet deep at normal low pool.

Wildlife vegetative plantings have been provided for in the parks as indicated on the attached site plans.

The District agrees to provide a means of regulating flow through the breach in the embayment at Walla Walla Point for the purpose of surveying fish species use. Based upon the information obtained, future regulation of flow will be implemented during periods which would not affect water quality for swimming activities, if it is mutually agreed amongst the agencies that flow regulation would be beneficial.

The District acknowledges the following points as conditions established by reviewing and permitting agencies as conditions for their approval:

1. The acceptance of this mitigation plan is based upon the park development concepts identified in this document.
2. Should significant new resource data, not currently available, be developed prior to permit application, such information could be the basis for a re-evaluation of this mitigation package.

3. The Hydraulic Project Approvals for the five listed parks may contain conditions that place additional requirements on project development.

4. All compensation measures as described in this mitigation plan will be completed by December 31, 1989, provided that the parks are constructed as of that date. Should park development not occur as depicted in this document, an agreed upon portion of the proposed mitigation plan or an acceptable alternative reflecting the level of development to date will be implemented.

5. A Joint Washington Department of Fisheries and Chelan County PUD evaluation of the channel improvements is to be completed within the north confluence riparian area during the first years of operation. If the project does not provide the anticipated benefits, necessary modifications within the scope of District fisheries staff capabilities will be implemented. Minimum expectations in terms of densities for zero chinook is 500 fish per acre (0 fish per square meter) at selected times between May and July.

6. Any fishery impacts associated with future park development, exclusive of the parks identified in the mitigation plan, will require separate mitigation compensation measures.

Public Utility District No. 1 of Chelan County commits to implement the above fish and wildlife mitigation to compensate for habitat lost as a result of the development of Douglas County Parks Phase II, Walla Walla Point, North and South Confluence Parks and Daroga Park.

APPROVED:

Washington Department of Wildlife

By Curt Smith
Authorized Signature

Director
Title

10/4/88
Date

Chelan County Public Utility District No. 1

By Rob Miller
Authorized Signature

Environmental Specialist
Title

3-16-88
Date

Washington State Attorney General's Office

Approved as to form

By William C. Fry
Authorized Signature

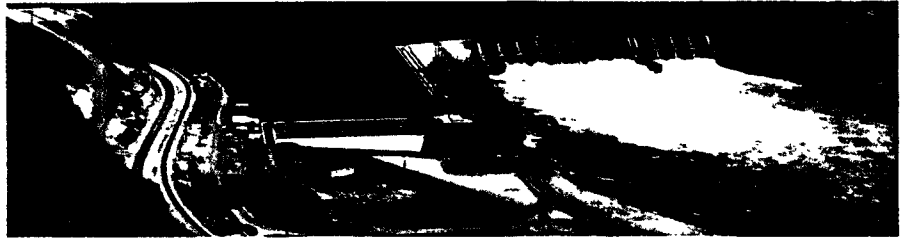
Assistant Attorney General
Title

7-5-88
Date

COMMISSIONERS

ALFRED PFLUGRATH, PRESIDENT
JEAN H. LUDWICK, VICE-PRESIDENT
JAMES R. WALL, SECRETARY
WILLIAM D. SCOTT, ASST. SECRETARY
ROBT. O. KEISER, COMMISSIONER

GERALD L. COPP, MANAGER



Public Utility District No. 1 of Chelan County

P. O. BOX 1231 • WENATCHEE, WASHINGTON 98801-0011 • (509) 663-8121

February 29, 1984

RECEIVED

MAR 5 1984

Mr. Frank Lockard, Director
Washington Department of Game
600 N. Capitol Way
Olympia, Washington 98504

WASH. DEPARTMENT
OF GAME

Dear Mr. Lockard:

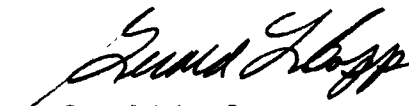
Enclosed you will find an Agreement Relating to Rock Island Project Mitigation and Enhancement Program for Wildlife, Resident Fish, and Steelhead Trout. This Agreement describes the responsibilities of the Public Utility District No. 1 of Chelan County to protect and enhance the wildlife, resident fish, and steelhead trout resources affected by the Rock Island Hydroelectric Project, as defined by Article 38 of the new license. The terms and objectives of this agreement have been developed following discussions and negotiations with WDG Region 3 personnel.

If you find the substance of this Agreement to be satisfactory, you may sign these enclosed copies. Please return one of your signed copies to me and retain the other for your files.

We appreciate the cooperation provided by your agency in the formulation of this fish and wildlife mitigation and enhancement program.

Sincerely yours,

PUBLIC UTILITY DISTRICT
NO. 1 OF CHELAN COUNTY


Gerald L. Copp
Manager

NOT SIGNED
BY GAME

Enclosure

AGREEMENT RELATING TO ROCK ISLAND PROJECT
MITIGATION AND ENHANCEMENT PROGRAM
FOR WILDLIFE, RESIDENT FISH AND STEELHEAD TROUT

THIS AGREEMENT, is made and entered into this ____ day of _____, 1984, by and between PUBLIC UTILITY DISTRICT NO. 1 OF CHELAN COUNTY, WASHINGTON, hereinafter referred to as the "District", and the STATE OF WASHINGTON, DEPARTMENT OF GAME, hereinafter referred to as the "WDG."

R E C I T A L S

WHEREAS, the District is a municipal corporation organized under the laws of the State of Washington, and pursuant to Order Issuing New License (Major) issued by the Federal Energy Regulatory Commission on May 13, 1981, is authorized to operate and maintain the Rock Island Project No. 943 located on the Columbia River, and

WHEREAS, the WDG, as an agency of the State of Washington, is charged with the responsibility of preserving the sports fishery and wildlife on the Columbia River within the area affected by the Rock Island Project, and with the responsibility of preserving the migration of steelhead in the Columbia River, and

WHEREAS, Article 38 of the Order on Rehearing dated November 23, 1982 pertaining to District's license for the Rock Island Project provides as follows:

"The Licensee shall, on or before May 31, 1984, file for Commission approval, a revised Exhibit S including among other things 'as-constructed' fishery drawings prepared in accordance with the Commission's Rules and Regulations, the results of pre- and post-flooding studies, and any proposals for mitigative measures needed to protect and enhance the fish and wildlife resources affected by project operations," and

WHEREAS, the parties desire to enter into this Agreement in order to define and provide a means of meeting the obligations of the District under Article 38 as the same pertain to the mitigation and enhancement of wildlife, resident fish and steelhead trout affected by operation of the Rock Island Project.

NOW, THEREFORE, in consideration of the mutual covenants and agreements herein contained, the parties agree as follows:

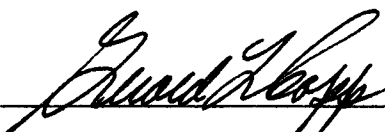
1. ROCK ISLAND PROJECT MITIGATION AND ENHANCEMENT PROGRAM. The parties have jointly developed the Rock Island Project Mitigation and Enhancement Program For Wildlife, Resident Fish and Steelhead Trout, hereinafter referred to as the "Program." A copy of the Program is attached hereto as Exhibit A and by this reference herein incorporated.

2. IMPLEMENTATION OF MITIGATION AND ENHANCEMENT PROGRAM. The District and the WDG hereby approve and adopt the Program. The District and the WDG shall each comply with and perform their respective obligations as set forth in the Program. The parties agree that the costs set forth in Exhibit B attached hereto are reasonable estimates of expenditures required for implementation of the Program.

3. SATISFACTION OF ARTICLE 38 REQUIREMENTS. The parties agree that implementation of the Program will fulfill and discharge the District's obligations under Article 38 to protect and enhance the wildlife, resident fish and steelhead trout resources affected by project operations. Except as provided in the Program, the District shall have no further obligation to protect and enhance wildlife, resident fish and steelhead trout affected by the Rock Island Project or otherwise mitigate for Rock Island Project impacts.

4. APPROVAL BY FERC. It is the intention of the parties that this agreement shall be filed with FERC for approval as part of the District's Revised Exhibit S for the Rock Island Project. In the event FERC fails to approve the Program in its present form, then this Agreement shall be null and void.

PUBLIC UTILITY DISTRICT NO. 1
OF CHELAN COUNTY, WASHINGTON

By 

Title Manager

STATE OF WASHINGTON, DEPARTMENT
OF GAME

By _____

Title _____

ROCK ISLAND PROJECT MITIGATION AND ENHANCEMENT PROGRAM FOR
WILDLIFE, RESIDENT FISH, AND STEELHEAD TROUT

1. Wildlife Habitat Plantings- Public Utility District No. 1 of Chelan County, Washington, hereinafter referred to as "District" and the State of Washington, Department of Game, hereinafter referred to as "WDG" recognized the loss of potentially important wildlife habitat early in the pre and post flood study periods pertaining to the Rock Island Project. As a result, they jointly developed a wildlife habitat vegetation plan and the District implemented the plan. Combinations of wildlife cover and food plants were cultivated on 43 acres of District lands surrounding two of the Rock Island ponds.

District will manage these 43 acres of wildlife habitat plantings by means of irrigation, fertilization, cultivation, and propagation, as needed, to mitigate impacts of habitat inundation associated with the second powerhouse pool raise. These areas are now 4-5 years old and receive good use by pheasants, quail, doves, geese, ducks, raptors, nongame birds, and muskrats. District will conduct annual wildlife surveys to evaluate wildlife populations benefitting from the plantings. Habitat management will be modified as needed to further enhance wildlife use of the plantings.

2. Wenatchee River Confluence Interpretive Natural Areas - The District has submitted, and received FERC approval, for an Exhibit R (Recreation) plan for FERC Project No. 943. The Exhibit R plan will ensure protection and management as an interpretative/natural area of approximately 90 acres of riparian lands within the south confluence site and approximately 26 acres of riparian lands within the north confluence site.

The District proposes that maintenance of the riparian lands within the south and north confluence areas will mitigate wildlife habitat inundation impacts associated with the reservoir rise. The sites are low, marshy wetlands and riparian areas. Waterfowl, aquatic furbearers, pheasants, quail, and a variety of nongame wildlife and raptors inhabit the area. The habitat at the mouth of the Wenatchee River is probably the best wildlife habitat within the Rock Island Reservoir study area, rivaled only by the goose nesting islands in the downstream portion of the reservoir.

District submits that the riparian lands within the north and south confluence Exhibit R sites can serve as multiple use areas to satisfy the needs of both the Exhibit R and Exhibit S. Because of the residential nature of much of the Rock Island Reservoir shoreline, much wildlife use within the study area is in the form of nature viewing. A nature trail and interpretive center and displays will enhance nature viewing opportunities but will control the impacts of human activity on wildlife. Wildlife management techniques proposed to increase the wildlife carrying capacity of these two areas include: wood duck and goose nest structures, game bird feeders, a man-made raptor perch/nest structure, and management of vegetation for optimum wildlife benefits.

EXHIBIT A

3. Swakane HMA Habitat Improvement - The original filling of Rock Island Reservoir inundated an unknown number of acres of shoreline lands. Historical photographs indicate that these lands did not support dense riparian vegetation normally thought to be associated with freeflowing rivers. Instead a wide cobble beach occurred between the river level and the permanent vegetation. Annual flooding and scouring inhibited the establishment of permanent vegetation within this cobble corridor. Historical photographs further indicate that vegetation at the high water mark was characteristic of the shrub-steppe community rather than riparian communities. However, lands inundated by the original project no doubt had some wildlife values.

The District will (under the guidance of WDG) expand upland game bird roosting cover within the WDG Swakane Habitat Management Area. This will include up to 60 man days of labor per year for the first four years, the development stage, and up to 15 man days for maintenance per year thereafter for the term of the license. The District will install and maintain about 1,000 feet of irrigation pipe (which the District will provide) and plant and maintain trees and shrubs presently in the possession of WDG.

4. Wood Duck Nest Structures - An experimental wood duck nesting project in 1983 indicates that a nesting population of wood ducks can be established within the project area. Twenty nest boxes were erected along the project in 1983 and wood ducks nested in 12 of them (60%). The 12 nesting attempts produced a total of 56 fledged ducklings. Because wood duck use of nest structures increases with time, production should increase in future years. Establishing a nesting population of wood ducks would enhance wildlife viewing opportunities within the project area (complimenting the Exhibit R sites) and provide hunting opportunities outside the project area.

The District will erect, maintain, and monitor 60 nest structures for wood ducks at favorable locations along Rock Island Reservoir and the lower Wenatchee River. This should result in approximately 150 or more fledged ducklings per year and would provide viewing opportunities of this unique and beautiful bird.

5. Goose Nesting Structures - Canada geese readily accept nesting structures along the Columbia River. Elevated nest structures have been successful along Rocky Reach, Wells, and Chief Joseph pools. Use of nest structures usually increases over several years after geese become imprinted to them. Within 3-4 years after erection, goose nest structure use usually averages about 40%. Nesting success in elevated goose nesting structures is usually about 100%. Presently, almost all suitable goose nesting areas along Rock Island Reservoir are filled to near capacity. In several cases, nests are crowded, causing stress induced abandonment.

The District will erect, maintain, and monitor 10 elevated goose nesting structures at favorable locations along the reservoir. These would produce about 4 active nests and 24 goslings annually, possibly more in future years. The nest structures should also spread nesting distribution within the study area. Spreading distribution would reduce stress caused by crowding and somewhat increase nesting success of geese already nesting within the project area.

6. Goose Nesting Surveys - Goose nesting along Rock Island Reservoir has been well documented since 1975 as a result of intensive surveys associated with the second powerhouse wildlife studies. These surveys followed nesting activity throughout the entire nesting season (mid-March through mid-May). Surveys are conducted about every two weeks and usually total five surveys during the season. These surveys collect precise data on number of nesting attempts, predation, abandonment, clutch size, hatching success, and number of goslings fledged. The surveys also allow accurate analysis of nesting problems (predation, crowding, too much vegetation) which can be addressed by management techniques. WDG and the USFWS, restricted by personnel workloads, are usually only able to survey areas once during the nesting season. While providing some useful data, that data cannot be analyzed as precisely as can intensive surveys conducted throughout the nesting season (e.g., eventual state of nests still being incubated would be unknown, nests are more likely to be overlooked on once per year surveys compared to five surveys per year, during once per year surveys it is often difficult to determine why a nest was unsuccessful (predation, abandonment, flooding) if it is late in the season).

The District will continue conducting goose nesting surveys along Rock Island Reservoir throughout the goose nesting season, using the same methods and schedules WDG used during pre and post flooding studies. The District will make the data from these surveys available to WDG and the USFWS so that these agencies may (1) correlate their once per year surveys to these data and (2) use the additional data to enhance their management policies for this particular area.

7. Upland Bird Feeders - WDG has found that, in northcentral Washington, upland bird feeders increase game bird distribution and maintain these populations year-round. California quail, and to some extent chukars, are the game birds which benefit most from feeders. Feeders are responsible for the establishment and year-round maintenance of many local quail populations in areas of Chelan, Douglas, and Kittitas counties which previously did not support quail. Pheasants, doves, gray partridge, and nongame birds also benefit from feeders.

The District will build, place, and maintain two upland bird feeders at favorable locations along Rock Island Reservoir. The feeders will be built and maintained similar to those which WDG maintains in northcentral Washington. These feeders will increase the carrying capacity of the project area by about 50 birds (two above average coveys of quail and several pheasants).

8. Use of Existing Powerline Corridor - It has long been recognized that powerline corridors have potential for negative impacts on birds, especially bald eagles and other raptors. Two possible impacts are electrocution from perching atop power poles and injury from flying into powerlines. Placing additional, required primary powerlines within existing powerline corridors is one method to mitigate powerline corridor impacts. The additional lines within one corridor make that corridor easier for birds to see and avoid, thus reducing bird collisions with powerlines. Concentrating additional primary powerlines within one existing corridor, rather than creating several

powerline corridors, also limits powerline impacts to one specific route rather than spreading impacts over several areas.

The District placed the two miles of additional primary powerlines associated with the Rock Island second powerhouse within an existing powerline corridor. This in itself lessened wildlife impacts associated with transmission lines necessary for the Rock Island Project.

9. Man-made Raptor Perches - Man-made perches have been readily accepted by a wide variety of birds, especially raptors, along the mid-Columbia River. Perches erected primarily for wintering bald eagles have also received significant use by osprey, red-tailed hawks, kestrels, great horned owls, other owl species, ravens, great blue herons, gulls, kingfishers, and songbirds. Man made perches are very effective at increasing bird use within areas, especially near water, where natural perch sites are lacking.

The District will erect and maintain two raptor perches at favorable locations along the reservoir. Perch specifications and locations will be based upon the best information which the state of the art and local experts can provide. Perch specifications and locations will be targeted for wintering bald eagles. They should also be used by osprey which nest along the upstream portion of the reservoir.

10. Aerial Bald Eagle Surveys - More than 200 bald eagles winter along the Columbia River and associated major water bodies in eastern Washington. Aerial surveys of wintering bald eagles provide valuable management data on population size, age structure, seasonally important concentration areas, perch site preferences, food sources, and movements. This information is also useful in identifying potential impacts to bald eagles which may result from hydroelectric or other development activities. Data from aerial surveys can provide much information to adequately address these impacts and assess mitigation techniques.

During the winters of 1982-83 and 1983-84 the District, in cooperation with the P.U.D.s of Douglas and Grant counties, funded aerial surveys of wintering bald eagles in eastern Washington. The P.U.D.s provided funds to the USFWS for airplane and pilot expenses and also provided observers. The District provided one wildlife biologist to act as observer/recorder during every flight. The District biologist also summarized the data and made them available to USFWS and WDG bald eagle management personnel.

11. Rock Island Ponds Fishery Management - According to the WDG post flood report the Rock Island ponds provided as much as 6,700 fisherman-days of recreation per post flood year. This recreation is attributed to enlargement of the ponds by the District and fishery management by WDG. WDG rehabilitated the four largest ponds and stocked varying combinations of rainbow trout, bluegill, and largemouth bass.

The District will cooperate with WDG in the fishery management of the Rock Island ponds. This cooperative management will involve providing labor and chemicals to assist WDG with fish rehabilitation projects at these ponds when WDG determines that rehabilitation is

necessary. These efforts will serve to maintain the quality of the fishery of these ponds. With cooperative management the ponds should continue to support the additional 6,000 plus fisherman days per year which the second powerhouse reservoir raise provided.

12. Maintain Production of 195,000 Steelhead at Chelan Hatchery - Steelhead spawning lost as a result of the Rock Island Dam second powerhouse and reservoir raise, if any, has not been quantifiable. If steelhead spawning prior to 1978 was on the order of one-fifth the historical number of chinook spawners (100-500 redds), then from 20-100 steelhead redds may have been spawned at the Wenatchee River mouth. This number of spawners could potentially produce from 2,000-10,000 downstream migrating smolts per year based on current survival rates. To resolve the issue of possible losses to steelhead spawning, the District will continue funding the production of 195,000 steelhead smolts at Chelan Hatchery. This will result in 35,000 more steelhead smolts per year, under current survival rates, than is presently required under the Rocky Reach mitigation agreement of July 2, 1963.
13. Mark and Maintain Designated Public Fishing Accesses - As part of the Rocky Reach Dam mitigation settlement, the District provided funds for the establishment of fishing access areas along the Wenatchee River. These fishing access areas, located between Leavenworth and the Columbia River, were acquired by and entrusted to WDG for management. Many of these areas have fallen into obscurity, are unknown to the fishing public, and are currently underutilized.

The District will cooperate with WDG to assure proper use of and public access to existing easement sites. The District will mark the boundaries of these fishing access areas and make their locations known to the public by means of maps and signs. The District also proposes to maintain the access areas. Maintenance would include maintenance of boundary signs, and litter barrels and periodic clean-up of the access areas.

This proposal would mitigate the loss of the steelhead fishing area at the mouth of the Wenatchee River by improving existing public fishing areas along the lower Wenatchee River. This proposal should ensure the availability and utilization of approximately 25 fishing access areas along the lower 18 miles of the Wenatchee River.

14. Production of 200,000 Skamania Steelhead Smolts - The WDG post flood report documents a reduction in fishing effort and steelhead harvest after the reservoir raise associated with the second powerhouse project. Also, the Rock Island Project adversely impacts the survival of steelhead smolts passing through the reservoir and powerhouses. This impact is estimated to result in the loss of approximately 85,000 steelhead smolts per year.

The District and WDG began a cooperative experiment in 1981 designed to enhance steelhead populations and sport fishing opportunities in the Wenatchee River, a tributary stream that flows into the Rock Island Reservoir. Under this program, the District provided rearing facilities and funding for the production of up to 200,000 steelhead

EXHIBIT A

smolts of the Skamania stock per year. This program has been renewed on a yearly basis. The District will make this experimental program permanent by providing the necessary facilities and annual funding.

The Skamania steelhead typically return to spawn in mid-summer compared to the native stocks which return in the fall. The Skamania stock are also larger fish, averaging about 10 pounds compared to the present steelhead stock which average 5-6 pounds. The District's proposal to maintain production of 200,000 Skamania steelhead per year will mitigate the loss of downstream migrants at Rock Island Dam and increase steelhead fishing effort and harvest. This proposal is contingent upon the availability of eggs from Skamania steelhead and favorable returns from the original plants. This proposal would (1) add 200,000 steelhead to the river system to mitigate downstream losses at Rock Island (estimated to be 85,000 steelhead smolts), (2) provide an additional 2000-4000 adult steelhead to the Wenatchee River sport fishery (estimated from current return rates for hatchery plants), (3) provide a steelhead fishery at a time of year when other anadromous fish are not available near the project area (i.e., increasing fishing opportunities and mitigate the loss of opportunity and harvest at the Wenatchee River mouth), and (4) provide large, trophy sized steelhead to increase fishing interest, effort, and fisherman satisfaction.

Should the Skamania stock program fail, due to either lack of egg availability or poor return rates, the District will provide necessary facilities and funding to rear up to 200,000 steelhead smolts of the endemic Wenatchee River stock per year.

Exhibit B. Estimated Cost Summary of the Rock Island Project Fish and Wildlife Mitigation Proposals

	<u>Initial Cost</u>	<u>Annual Cost</u>
1. Wildlife habitat plantings	350,000 ¹	50,000
2. Wenatchee River confluence interpretive natural areas	1,000,000	3,000
3. Swakane HMA habitat improvement	32,000	2,000
4. Wood duck nest structures	2,000	3,250
5. Goose nest structures	3,000	600
6. Goose nesting surveys	10,000	1,800
7. Upland bird feeders	1,350	750
8. Use of existing powerline corridor	0	0
9. Man-made raptor perches	2,200	0
10. Aerial bald eagle surveys	7,000 ¹	---
11. Rock Island sloughs fishery management	0	periodic
12. Maintain production of 195,000 steelhead at Chelan hatchery	---	6,000
13. Mark and maintain public fish accessess	25,000	25,000
14. Production of 200,000 Skamania steelhead smolts	85,000	35,000
TOTAL	<u>\$1,517,550</u>	<u>\$127,400</u>
	<i>110,300 - fish</i>	<i>60,000 - fish</i>
	<i>407,550 - wildlife</i>	<i>67,400 - wildlife</i>

¹ Funds Already Spent

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ROCK ISLAND PROJECT
SETTLEMENT AGREEMENT

Table of Contents

A. SCOPE AND DURATION

1. General Scope	2
2. Application to Administrative and Legal Proceedings	3
3. Term	3
4. Negotiation of Modifications to Agreement	4
5. Petition for Modification or Other Claim or Action	4
6. Resolution of Disputes	6
7. Effective Dates	9
8. Dismissal of Pending Appeals	9
9. Sections of Exhibit S Superseded	10

B. JUVENILE FISH BYPASS SYSTEMS

1. General Scope of Bypass Measures	11
2. Powerhouse No. 1 Schedule	11
3. Powerhouse No. 2 Schedule	14
4. Prototype Development and Testing	17
5. Bypass Installation Criteria	18
6. Powerhouse No. 1 Unit Selection Option	20
7. Capital Cost Estimates	21
8. Operation and Maintenance	22
9. Use of Unexpended Funds for Capital Improvement	24
10. Operational Preference	25
11. Study Methodologies and Criteria	25
12. Initiation of Alternative Funding Program	26

C. FISHERIES CONSERVATION ACCOUNT

1. Establishment of Account	27
2. Calculation of Annual Credit	28
3. Use of Account	28
4. Purchase of Spill	29
5. Bypass Construction After Establishment of Account	29
6. Account Carryover and Deficit	33

1 D. SPILL PROGRAM

- 2
3 1. Annual Spill Plan 33
4 2. Phase I Spill 34
5 3. Phase II Spill 37

6 E. HATCHERY-BASED COMPENSATION

- 7
8 1. Program Obligation 37
9 2. Phase I Hatchery Compensation Schedule 38
10 3. Phase I Facility Capacity Requirements 39
11 4. Evaluation Requirements 41
12 5. Construction Criteria 41
13 6. Rocky Reach Credit 43
14 7. Phase II Hatchery Compensation 43
15 8. Hatchery Contracting Opportunities 45

16 F. ADULT FISH LADDERS

- 17
18 1. Modifications to Meet Operating Criteria 46

19 G. ROCK ISLAND COORDINATING COMMITTEE

- 20
21 1. Establishment of Committee 47
22 2. Use of Committee 47
23 3. Studies and Reports 47

24 H. FISHERY AGENCIES' AND TRIBES' RESPONSIBILITIES

- 25
26 1. Limitation of Mid-Columbia Proceeding 48
27 2. Support for Relicense 48
28 3. Stipulation of Adequacy 49
29 4. Fish and Wildlife Program 49
30 5. Limitation on Reopening 49
31 6. Additional Measures 50
32 7. Release and Waiver of Claims 50
33 8. Judicial Review 51
34 9. Cooperation in Studies 51

35 I. REGULATORY APPROVAL

- 36
37 1. FERC Orders 51
38 2. Performance Contingent on Approval 52
39 3. No Prejudice 52
40
41
42
43
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43
44
45
46
47

J. MISCELLANEOUS

1. Notices	53
2. Waiver of Default	53
3. Entire Agreement--Modifications	53
4. Benefit and Assignment	53
5. Inflation Calculations	54
6. Force Majeure	54
7. Execution	55
8. Authority	55
9. Action for Noncompliance	55

Public Utility District No. 1) Project No. 943
of Chelan County, Washington) Docket Nos. E-9569 et al.

This Agreement is made and entered into this 24th day of APRIL 1987, between and among Public Utility District No. 1 of Chelan County, Washington ("Chelan"), Puget Sound Power & Light Company ("Puget"), the National Marine Fisheries Service in its own capacity and as delegate for the United States Department of Commerce, the State of Washington acting by and through the Washington Department of Fisheries and the Washington Department of Game, the State of Oregon acting by and through the Oregon Department of Fish and Wildlife, the Confederated Tribes and Bands of the Yakima Indian Nation, the Confederated Tribes of the Colville Indian Reservation, the Confederated Tribes of the Umatilla Indian Reservation and the National Wildlife Federation (hereinafter collectively referred to as "Fishery Agencies and

1 Tribes") (hereinafter each of the above entities may be referred
2 to individually as a "Party" or collectively as the "Parties").
3

4
5 A. SCOPE AND DURATION

6
7 1. General Scope.

8
9 This Agreement establishes all of Chelan's obligations
10 with respect to development, installation, and operation of
11 juvenile downstream migrant bypass facilities, juvenile fish
12 passage through spill, hatchery compensation for fish losses, and
13 fish ladder operation for at least the Initial Period (see sub-
14 sections A.3 and A.5). The preceding anadromous fish measures,
15 when carried out pursuant to this Agreement, shall be conclusive-
16 ly considered to fulfill Chelan's obligation to protect, mitigate
17 and compensate for the fish resource at least during the Initial
18 Period. This Agreement establishes the Fishery Agencies' and
19 Tribes' obligations in support of this settlement, including the
20 expeditious issuance of a new license by the Federal Energy
21 Regulatory Commission ("FERC") for the Rock Island Project for a
22 term of forty (40) years and with respect to actions necessary to
23 facilitate the performance of Chelan's obligations under this
24 Agreement. This Agreement also requires effectiveness evaluation
25 programs for measures identified herein and establishes proce-
26 dures for coordination between Chelan and the Fishery Agencies
27 and Tribes.
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1 2. Application to Administrative and Legal Proceedings.

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3 (a) It is the intent of the Parties that this Agreement
4 shall be the basis for (1) the dismissal of the Mid-Columbia
5 proceeding, Docket No. E-9569 et al., insofar as that proceeding
6 pertains to the Rock Island Project, (2) the prompt issuance of a
7 new forty (40) year license for the Rock Island Project consis-
8 tent with the decision of the court in Yakima Indian Nation v.
9 FERC, 747 F.2d 466 (9th Cir. 1984), and (3) compliance by Chelan
10 at the Rock Island Project with the 1984 Columbia River Basin
11 Fish and Wildlife Program adopted by the Northwest Power Planning
12 Council.
13
14

15 (b) This Agreement shall be incorporated into the new
16 license for the Rock Island Project and enforceable by FERC as a
17 special article thereof.
18
19

20 3. Term.

21 The term of this Agreement shall commence on the date of
22 execution by all Parties and shall continue for the term of the
23 new license to be issued for the Rock Island Project in the
24 remanded licensing proceeding, plus the term(s) of any annual
25 license(s) which may be issued after the foregoing new license
26 has expired. That portion of the term commencing with the filing
27 of this Agreement with the FERC for approval and extending for
28 thirteen (13) years thereafter shall be referred to throughout
29 this Agreement as the "Initial Period."
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1 4. Negotiation of Modifications to Agreement.

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3 No sooner than six (6) months prior to expiration of the
4 Initial Period, any Party may request all other Parties to com-
5 mence negotiations to modify the terms and conditions hereof or
6
7 to replace this Agreement in whole or in part. Any modification
8 hereto shall be subject to FERC approval, except that the Parties
9 may agree to implement on an interim basis pending FERC approval
10 any measure not requiring prior FERC approval. No Party shall
11 file a petition with the FERC pursuant to subsection A.5 to
12 modify this Agreement without first presenting the proposed
13 modification to all Parties and allowing a reasonable opportunity
14 to negotiate, but in no case greater than ninety (90) days, with
15 respect to such modifications under this subsection A.4.
16

17 5. Petition for Modification or Other Claim or Action.

18 (a) Subject to the limitation stated in the final sen-
19 tence of subsection A.4, at any time after the Initial Period any
20 Party to this Agreement may:
21

22 (1) Request the imposition by the FERC of differ-
23 ent, additional or modified fish protection measures,
24

25 (2) Bring any cause of action, raise any defense
26 or claim, or rely on any theory in any appropriate forum,
27

28 (3) Petition any appropriate administrative agency
29 or political body for relief, including the deletion of one or
30 more measures otherwise in effect under this Agreement, or
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1 (4) Take other appropriate action relating to any
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3 issue or matter addressed by this Agreement or which could have
4
5 been addressed by this Agreement or that otherwise relates to the
6
7 Rock Island Project and its operations.
8

9 (b) In any action under this subsection the petitioning
10
11 Party shall have the burden of proof. The Parties will continue
12
13 to implement this Agreement until the relief sought becomes ef-
14
15 fective by operation of law, unless otherwise agreed.
16

17 (c) With respect to any petition or suit filed pursuant
18
19 to this subsection A.5 and any subsequent judicial review there-
20
21 of, or any renewal of appeal under subsection A.8, nothing in
22
23 this Agreement shall bar, limit or restrict any Party from rais-
24
25 ing any relevant issue of fact or law, regardless of whether such
26
27 issue is or could have been addressed by this Agreement; pro-
28
29 vided, that, consistent with subsection H.7, no claim shall be
30
31 made for damages that might have arisen during the period from
32
33 March 7, 1979 through the Initial Period.
34

35 (d) Notwithstanding any other provision of this sub-
36
37 section A.5, if the schedule for bypass development, testing and
38
39 installation for either powerhouse is extended pursuant to sub-
40
41 sections B.2(i) or B.3(g), no Party shall avail itself of any
42
43 reopener clause as to bypass measures at that powerhouse until
44
45 the expiration of all such time extensions.
46
47

1 (e) Notwithstanding any other provision of this sub-
2 section A.5, any Party may participate in any legislative or
3 administrative proceeding dealing with fish protection or compen-
4 sation issues; provided, that, consistent with subsection H.6, no
5 Party shall advocate or support the imposition of fish protection
6 or compensation measures at the Rock Island Project that are
7 different from or in addition to those required by this Agreement
8 until after expiration of the Initial Period.
9

10 (f) The Parties intend that this subsection A.5 shall
11 apply to each and every provision of this Agreement, and there-
12 fore the terms of this subsection A.5 are hereby incorporated by
13 reference into and shall apply to every other provision of this
14 Agreement as if set out fully in each such provision.
15

16
17 6. Resolution of Disputes.
18

19 (a) Any dispute between the Parties concerning com-
20 pliance with this Agreement shall be referred to the Rock Island
21 Coordinating Committee (the "Committee") for consideration. The
22 Committee shall convene as soon as practicable following issuance
23 of a written request by any Party. All decisions of the Commit-
24 tee must be by consensus of all Committee representatives. In
25 the event the Committee cannot resolve the dispute within fifteen
26 (15) days after its first meeting on said dispute, the Committee
27 will give notice of its failure to resolve the dispute to all
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1 Parties. Thereafter, if the dispute qualifies under subsec-
2 tion A.6(b), any Party may request the FERC to refer the dispute
3 to the presiding judge in the Mid-Columbia proceeding for expe-
4 dited review in accordance with the procedures set forth in this
5 subsection A.6. Any issue in dispute that is not subject to the
6
7
8
9 expedited review process may be referred to the FERC for resolu-
10 tion pursuant to the FERC's Rules of Practice and Procedure.
11
12
13

14 (b) The expedited review process specified in this
15 subsection A.6 shall be utilized, unless otherwise agreed pur-
16 suant to subsection A.6(e), to resolve any issue(s) in dispute
17 between the Parties that arises under this Agreement where the
18 amount in controversy is less than \$325,000. For the purpose of
19 this subsection the amount in controversy shall be determined by
20 calculating the annual cost of the Fishery Agencies' and Tribes'
21 proposal for resolution of the dispute and subtracting from that
22 amount the calculated annual cost of Chelan's proposal for reso-
23 lution of the dispute.
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34 (c) Under the expedited review process, each Party that
35 desires to present an initial position statement to the judge
36 shall file such statement with the judge and all other Parties
37 within twenty (20) days of mailing of notice by a Party that
38 expedited review is requested. Responsive statements shall be
39 filed and served within forty (40) days of the mailing of said
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1 notice. The judge shall set a date for submission of any brief-
2 ing, affidavits or other written evidence and a further date for
3 hearing of oral evidence and argument. Except by agreement of
4 all Parties involved in the dispute, the hearing shall be held
5 not later than seventy (70) days after the date of mailing of the
6 requesting Party's notice or as soon thereafter as the judge
7 shall be available. The hearing shall be held in Seattle,
8 Portland or any other location agreed upon by the Parties and the
9 judge. The judge shall decide all matters presented within
10 fifteen (15) days of the hearing or as soon thereafter as
11 possible.
12

13 (d) All decisions of the judge under the expedited
14 review process shall be effective upon issuance and pending
15 appeal, if any. Nothing in this subsection A.6 shall limit or
16 restrict the right of any Party to petition the FERC to review
17 any decision of the judge. All such appeals shall be in accor-
18 dance with the FERC's Rules of Practice and Procedure.
19

20 (e) The Parties may agree to refer any issue subject to
21 expedited review to a third party other than the presiding judge
22 in the Mid-Columbia proceeding for processing pursuant to this
23 subsection or as otherwise agreed by the Parties. Any third
24 party determination under this subsection shall be effective upon
25 issuance and shall be subject to de novo FERC review.
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1 7. Effective Dates.

2 (a) Except as otherwise specified in this subsection
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4 A.7, this Agreement shall become effective upon the issuance of a
5
6 final order by the FERC approving this Agreement and issuing a
7
8 new license to Chelan for the Rock Island Project.
9

10 (b) Notwithstanding subsection A.7(a) above, subsec-
11
12 tions D.1, D.2, H.1, H.2, H.3, H.4, H.5, H.6, H.7 and H.9, and
13
14 Section G of this Agreement, and Sections B, E and F to the
15
16 extent that they do not require substantial construction or
17
18 structural modification of the dam or design or construction of
19
20 hatchery facilities shall be effective immediately upon execution
21
22 of this Agreement by all Parties.
23

24 (c) The Parties agree to immediately seek interim
25
26 approval by the FERC of Section E of this Agreement by June 1,
27
28 1987 in order to implement design and construction of hatchery
29
30 facilities.
31

32 8. Dismissal of Pending Appeals.

33 All Parties agree to request dismissal without prejudice
34
35 of their pending appeals to the FERC of the initial decision of
36
37 the presiding judge in the Mid-Columbia proceeding dated
38
39 January 31, 1986. It is further agreed that pursuant to 18
40
41 C.F.R. § 385.711(a)(3) said appeals may be renewed or refiled by
42
43 any Party after expiration of the Initial Period, and all Parties
44
45 hereby waive any defense to the renewal or refiling of said
46
47

1 appeals after that date based on the passage of time, such as
2
3 limitation periods or laches.
4

5 9. Sections of Exhibit S Superseded.
6

7 The following mitigation measures which are set forth in
8 the Exhibit S submitted by Chelan as part of its application for
9 a new license for the Rock Island Project are expressly super-
10 seded by this Agreement:
11
12

<u>Page</u>	<u>Mitigation Proposal</u>
17 Page 7, Item 4	First Powerhouse Usage
19 Page 7, Items 13 and 14	Steelhead Trout Proposal
21 Page 8, Item 6	Juvenile Bypass
23 Page 8, Item 9	Hatchery Size
25 Page 21, Item 1	Steelhead Production
27 Page 28, Item 1	Downstream Losses
29 Pages 30 and 32, Items 2-5	Downstream Losses
31 Pages 36 and 37, Item 2	Steelhead Production
33 Appendix F	Schedule for Implementation (anadromous fish measures only)
37 Appendix H	Estimated Costs (anadromous fish measures only)

1 B. JUVENILE FISH BYPASS SYSTEMS

2
3 1. General Scope of Bypass Measures.

4
5 (a) Subject to the schedules, criteria and conditions
6 set forth in this Agreement, or as hereafter modified, Chelan
7 will fund and conduct a Bypass Development Program to study,
8 design, develop, test and install mechanical juvenile fish Bypass
9 Systems for the Rock Island Project. A Bypass System is a system
10 for deflection, collection and routing of juvenile salmonids past
11 operating powerhouse generating units.
12
13

14
15 (b) All construction contemplated or proposed under
16 this Agreement shall be designed and constructed, regardless of
17 the method of financing under this Agreement, using quality
18 materials and then-current engineering standards for the purpose
19 of obtaining a high-quality product designed to require low main-
20 tenance and have a long useful life.
21
22

23
24 2. Powerhouse No. 1 Schedule.

25
26 The following is the schedule for the Bypass Development
27 Program at Powerhouse No. 1:
28
29

30 (a) in 1987:

31
32 (1) Construct hydraulic model of Powerhouse No. 1
33 at Washington State University and commence in-
34 vestigations of possible Bypass System, including
35 devices and systems suggested by the Fishery
36 Agencies and Tribes.
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1 (2) Perform hydroacoustic monitoring to determine
2 vertical and horizontal fish distribution.
3

4
5 (b) in 1988:
6

7 (1) Begin design work on a Prototype Guidance
8 Device (as defined in subsection B.4(a)) that
9 satisfies the criteria specified in
10 subsection B.4(b).
11

12 (2) Begin necessary modifications to the power-
13 house for installation of the Prototype Guidance
14 Device.
15

16
17 (c) in 1989:
18

19 (1) Construct, install and test the Prototype
20 Guidance Device (assuming a design is selected
21 pursuant to subsection B.4(b)).
22

23
24 (d) in 1990:
25

26 (1) Make necessary modifications to the Prototype
27 Guidance Device.
28

29 (2) Begin engineering and construction of a proto-
30 type bypass flume or conduit (provided that pre-
31 liminary fish guidance efficiency test results on
32 the Prototype Guidance Device indicate a reasonable
33 probability that subsection B.5 criteria will be
34 satisfied).
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1 (3) Test the Prototype Guidance Device based on
2 agreed method to determine the fish guidance effi-
3 ciency of the bypass device and flume/conduit
4
5 combination.
6
7

8
9 (e) in 1991 (all schedule activities after 1990 assume
10 that all bypass installation criteria specified in
11 subsection B.5 have been met and the decision has
12 been made to install the system; if the subsec-
13 tion B.5 criteria cannot be satisfied at this time
14 the Parties agree to continue modeling and modifi-
15 cation of the Prototype Guidance Device so long as
16 the Account referred to in Section C has not yet
17 been established):
18
19

20 (1) Begin installation of Bypass System (the Par-
21 ties recognize that the currently contemplated
22 design of a Bypass System at Powerhouse No. 1 will
23 require relocation of the trashracks).
24

25 (f) in 1992:

26 (1) Complete Bypass System installation.
27

28 (g) in 1993:

29 (1) Perform bypass fish guidance efficiency study
30 on installed Bypass System based on agreed method.
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1 (h) in 1994-95:

2
3 (1) Adjust and evaluate Bypass System based on
4
5 operating experience.
6

7 (i) The foregoing schedule for the Bypass Development
8
9 Program may be modified by written agreement of all
10
11 Parties or as the result of the occurrence of any
12
13 of the events identified in subsection J.6. As an
14
15 alternative to the foregoing schedule, a Bypass
16
17 Development Program may proceed, after establish-
18
19 ment of the Account pursuant to Section C, under a
20
21 schedule prepared by the Fishery Agencies and
22
23 Tribes in accordance with the conditions specified
24
25 in Section C. Any such alternate schedule shall
26
27 allow Chelan adequate time to perform all scheduled
28
29 activities.
30

31 (j) Upon notification to Chelan of the decision to
32
33 install a Bypass System at Powerhouse No. 1 pur-
34
35 suant to either subsection B.5 or C.5, Chelan may
36
37 elect to delay said installation for a period not
38
39 to exceed one (1) year.
40

41 3. Powerhouse No. 2 Schedule.

42
43 The following is the schedule for the Bypass Development
44
45 Program at Powerhouse No. 2:
46
47

1 (a) in 1987:

2
3 (1) Reactivate hydraulic model at Washington State
4 University and resume investigation of possible
5 Bypass System, including devices and systems sug-
6 gested by the Fishery Agencies and Tribes.
7

8
9 (2) Begin design work on a Prototype Guidance
10 Device that satisfies the criteria specified in
11 subsection B.4(b).
12
13
14
15

16 (b) in 1988:

17
18 (1) Construct, install and test the Prototype
19 Guidance Device (assuming a design is selected
20 pursuant to subsection B.4(b)).
21
22
23

24 (c) in 1989:

25
26 (1) Make necessary modifications to the Prototype
27 Guidance Device and continue testing. Test for
28 fish guidance efficiency based on agreed method.
29
30
31

32 (d) in 1990 (all schedule activities after 1990 assume
33 that all bypass installation criteria specified in
34 subsection B.5 have been met and the decision has
35 been made to install the system; if the subsection
36 B.5 criteria cannot be satisfied at this time the
37 Parties agree to continue modeling and modification
38 of the Prototype Guidance Device so long as the
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1 Account referred to in Section C has not yet been
2 established):

3
4 (1) Begin installation of Bypass System.

5
6 (e) in 1991:

7
8 (1) Complete Bypass System installation.

9
10 (2) Perform bypass fish guidance efficiency study
11 on installed Bypass System based on agreed method.

12
13 (f) in 1992:

14
15 (1) Adjust and evaluate Bypass System based upon
16 operating experience.

17
18 (g) The foregoing schedule for the Bypass Development
19 Program may be modified by written agreement of all
20 Parties or as the result of the occurrence of any
21 of the events identified in subsection J.6. As an
22 alternative to the foregoing schedule, a Bypass
23 Development Program may proceed, after establish-
24 ment of the Account pursuant to Section C, under a
25 schedule prepared by the Fishery Agencies and
26 Tribes in accordance with the conditions specified
27 in Section C. Any such alternate schedule shall
28 allow Chelan adequate time to perform all scheduled
29 activities.
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1 4. Prototype Development and Testing.
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3 (a) A "Prototype Guidance Device" is defined as a
4 mechanical device consisting of a submerged traveling screen, a
5 bar screen or some newly developed device that functions in a
6 manner similar to such screens, plus all auxiliary devices in-
7 corporated into the initial design for the primary purpose of
8 guiding fish into the screen. Also included in this definition
9 shall be minor modifications to the original installation made in
10 an effort to improve fish guidance efficiency, which may include,
11 by way of example, changing the angle, porosity, elevation, or
12 leading or trailing edge of the screen; changing the angle,
13 porosity or length of auxiliary deflection devices; changing the
14 lighting; extending the ceiling or floor; changing the gap at the
15 top of the screen; relocating or modifying deflectors on the
16 trashrack or otherwise altering the hydrodynamics of the trash-
17 racks; or relocating the trashracks at Powerhouse No. 1. More
18 than one such modification to the Prototype Guidance Device may
19 be tested simultaneously or alternatively during the same study
20 year. This definition does not include major redesign or re-
21 construction which may include, by way of example, relocation of
22 the trash rack at Powerhouse No. 2, removal or installation of
23 concrete that requires dewatering, lengthening of the screen
24 requiring major structural work, conversion from a submerged
25 traveling screen to bar screen or vice versa. Any such major
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1 modification or reconstruction shall be deemed to be construction
2 of a new Prototype Guidance Device. Regardless of character, any
3 modification that would result in an increase in the cost of
4 installing a Bypass System utilizing that modification to a point
5 where the cost of installation exceeds the applicable cost limi-
6 tation in subsection B.7 shall be a major reconstruction.
7
8
9

10
11 (b) The decision to proceed from studies to the manu-
12 facture and installation of a Prototype Guidance Device at each
13 powerhouse shall be made by the Fishery Agencies and Tribes if
14 the hydraulic model studies indicate interception by the guidance
15 device as designed of the portion of the intake flow that con-
16 tains 50% or more of the juvenile migrants of all species as
17 identified by vertical distribution studies. Otherwise, manu-
18 facture and installation of a Prototype Guidance Device shall be
19 by mutual consent of all Parties.
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31 (c) Chelan shall not be obligated to manufacture and
32 install more than one (1) Prototype Guidance Device for each
33 powerhouse, except by mutual consent of all Parties. Additional
34 Prototype Guidance Devices may be manufactured, installed and
35 tested pursuant to subsection C.3 after establishment of the
36 Account.
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43 5. Bypass Installation Criteria.
44

45 Chelan's obligation to install a mechanical Bypass
46 System at either or both powerhouses shall be contingent on
47

1 satisfaction of the criteria specified in either (a) and (c) or
2
3 (b) and (c) below:

4
5 (a) If the Prototype Guidance Device at either power-
6
7 house achieves a point estimate of at least fifty percent (50%)
8
9 fish guidance efficiency based on the average of all species,
10
11 then the decision to install a Bypass System at that powerhouse
12
13 may be made by the Fishery Agencies and Tribes. Percent fish
14
15 guidance efficiency shall be expressed by the following formula:

16
17
$$\frac{\text{Sum of all salmonid migrants successfully guided by}$$

18
$$\text{device during the spring and summer migration}}{\text{Sum of all salmonid migrants passing through the unit}}$$
 X 100
19
20 intake during the spring and summer migration.
21

22
23 Fish guidance efficiency shall be measured in accordance with a
24
25 testing method agreed to by all Parties.
26

27 (b) If the Prototype Guidance Device guides less than
28
29 fifty percent (50%) of the average of all species as defined in
30
31 (a) above, then the decision to install a Bypass System at that
32
33 powerhouse shall be made only by mutual consent of all Parties to
34
35 this Agreement.
36

37 (c) Regardless of the fish guidance efficiency of any
38
39 tested device, a Bypass System will not be installed at either
40
41 powerhouse in the event of any of the following:
42

43 (1) It is determined by Chelan's consulting
44
45 engineers and confirmed by the FERC that the selected
46
47 Bypass System would be unsafe or cause substantial

1 damage to the powerhouse structure or to the generating
2 units; or
3

4 (2) It is determined that the selected Bypass
5 System would degrade the generating efficiency of the
6 generating units by more than 2.0%; or
7

8 (3) The final estimated cost of construction and
9 installation of the Bypass System exceeds the appro-
10 priate cost limitation in subsection B.7, subject to
11 subsection B.7(c).
12

13 6. Powerhouse No. 1 Unit Selection Option.
14

15 In the event all necessary criteria for installation of
16 a Bypass System specified in subsection B.5 are satisfied with
17 regard to Powerhouse No. 1 and the decision is made to install,
18 Chelan shall have the option to install the selected Bypass
19 System on all units or only on units Nos. B-5 through B-10,
20 inclusive. If Chelan elects to install such system only on units
21 Nos. B-5 through B-10, Chelan agrees not to operate units
22 Nos. B-1 through B-4 between April 1 and August 31 of each year
23 (alternative dates may be established by agreement of the Par-
24 ties). During said period Chelan reserves the right to operate
25 the "house unit", Unit B-H, when necessary to provide reliable
26 station service. For all purposes under this Agreement instal-
27 lation of a Bypass System on units Nos. B-5 through B-10, with
28 the accompanying shutdown of units Nos. B-1 through B-4 from
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1 April 1 to August 31 (or such other period as may be agreed
2 upon), shall constitute a complete juvenile fish Bypass System
3 for Powerhouse No. 1.
4
5

6
7 7. Capital Cost Estimates.
8

9 (a) The estimated capital cost of installation of
10 Bypass Systems, exclusive of modeling, prototype manufacture,
11 prototype installation and testing, is:
12
13

14 (1) \$17,900,000 (1986 dollars) at Powerhouse No. 1.
15

16 (2) \$7,700,000 (1986 dollars) at Powerhouse No. 2.
17

18 (b) Subject to the testing, Prototype Guidance Device
19 and installation criteria specified in subsection B.5, Chelan
20 shall be obligated to install a juvenile Bypass System at either
21 or both powerhouses unless the final cost estimate prior to
22 preparation of the full design for such installation at the
23 applicable powerhouse(s) exceeds 1.2 times the cost estimate for
24 such powerhouse(s), as specified in subsection B.7(a), subject to
25 subsection B.7(c). If such final cost estimate for either
26 juvenile Bypass System is greater than 1.2 times the applicable
27 cost estimate, as specified above, then Chelan shall have no
28 obligation to install such Bypass System under this Agreement
29 unless mutually agreed by all Parties or ordered pursuant to
30 subsection A.5.
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45 (c) In the event the cost estimate referred to in sub-
46 section B.7(b) above exceeds the 1.2 multiplier, upon written
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1 request by the Fishery Agencies and Tribes, Chelan shall go out
2 for public bid for the proposed Bypass System on a "turnkey"
3 basis, which bid shall include the cost of design as well as
4 manufacture and installation. If the bid proposal submitted by
5 the lowest responsible bidder is within the 1.2 multiplier
6 limitation for the applicable Bypass System, Chelan shall award a
7 contract and proceed with installation. If no responsible turn-
8 key bid proposal is received that is within the 1.2 multiplier,
9 Chelan shall have no obligation to award a contract or proceed
10 with installation of said Bypass System. The Parties agree that
11 in fairness to all prospective turnkey bidders the cost limita-
12 tions in effect under this Agreement shall be stated in the bid
13 documents.

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27 8. Operation and Maintenance.

28 (a) Chelan agrees to develop an operation and mainte-
29 nance plan for each installed Bypass System which is reasonably
30 acceptable to the Fishery Agencies and Tribes. The plan shall be
31 developed prior to completion of the installation of the selected
32 Bypass System and reviewed annually. The plan shall define in
33 detail when and how the devices are to be operated, inspection
34 and maintenance procedures, procedures for monitoring fish
35 guidance and fish quality and evaluation of any Bypass System
36 improvements installed pursuant to subsection B.8(c) or B.9.
37 Chelan will maintain each installed Bypass System in a manner
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1 that will ensure that all devices operate at the same level of
2 mechanical performance and reliability that they achieve upon
3 completion of installation and any subsequent modifications.
4 Chelan shall not be held responsible for reductions in F.G.E. of
5 the Bypass System resulting from deviations in fish behavior or
6 other causes beyond Chelan's control.
7

8 (b) Chelan agrees to replace installed Bypass Systems
9 or devices at the end of their useful life with identical or, by
10 mutual agreement of the Parties, improved systems or devices, so
11 that Bypass Systems and devices continue to operate during the
12 term of this Agreement. Improved systems or devices will be
13 installed under this subsection B.8(b) when the estimated cost
14 for their installation is less than or equal to the estimated
15 cost of installing a system or device identical to the ones being
16 replaced. The end of the useful life of a Bypass System or
17 device shall be reached when either:
18

19 (1) The system or device ceases to operate at
20 substantially the same level of mechanical performance and relia-
21 bility that it achieved upon completion of installation and any
22 subsequent modifications or
23

24 (2) Maintenance costs sufficient to maintain the
25 above level of performance and reliability make it economical to
26 replace the system or device.
27

1 (c) Chelan agrees to perform minor modifications to the
2 Bypass Systems or devices, such as redesign and replacement of
3 failure-prone components, minor modifications to reduce injury or
4 avoidance of guidance devices, and minor modifications to facili-
5 tate cleaning and inspection. Minor modifications may include
6 any of the measures described as such in subsection B.4(a).
7 Chelan will conduct an evaluation of any such minor modifications.
8

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15 9. Use of Unexpended Funds for Capital Improvement.
16

17 If a Bypass System is installed at either or both power-
18 houses for less than the applicable estimated cost specified in
19 subsection B.7(a), an amount equal to the cost estimate for that
20 system, less the amount actually expended for installation, shall
21 be available to the Fishery Agencies and Tribes for use by joint
22 agreement for capital improvements to the installed juvenile
23 Bypass System which are shown by test results to improve that
24 Bypass System's fish guidance efficiency or for studies designed
25 to develop improvements to the installed Bypass System; provided,
26 any expenditures pursuant to this subsection B.9 shall reduce the
27 amount of any such unused funds dollar for dollar. Any unexpended
28 funds available for use pursuant to this subsection B.9 shall
29 not be escalated for inflation pursuant to subsection J.5 beyond
30 the date of installation of the applicable Bypass System. In the
31 event Chelan elects pursuant to subsection B.6 to install bypass
32 devices on only six (6) units at Powerhouse No. 1, the applicable
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1 cost estimate for the purpose of this subsection B.9 shall be
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3 \$12,300,000.

4
5 10. Operational Preference.
6

7 If any units at Powerhouse No. 1 or Powerhouse No. 2
8
9 have a Bypass System installed and operational prior to installa-
10 tion of a Bypass System on other units (other than a Prototype
11 Guidance Device), then Chelan agrees to give operational prefer-
12 ence to those units that have a Bypass System installed. Chelan
13 will put on line within their efficient loading those units with
14 an operational Bypass System that are available for operation in
15 accordance with standard utility practices prior to putting on
16 line any unit in either powerhouse that is not equipped with a
17 Bypass System; provided, a unit shall not be declared unavailable
18 for operation solely because operation of another unit would be
19 more economical or financially useful.
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31 11. Study Methodologies and Criteria.
32

33 For purposes of subsections B.2 and B.3, the Parties
34 agree on the following methodologies and study criteria:
35

36 (a) All studies will be conducted following accepted
37 techniques and methodologies in use for similar studies at main-
38 stem Columbia Basin dams. All studies will be based on sound
39 statistical design and analysis.
40
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1 (b) Fish guidance efficiency tests will be conducted
2 using hydroacoustic and direct capture methods, and will include
3 assessment of injury and stress.
4
5

6
7 (c) All study designs and modifications to study de-
8 signs will be subject to agreement by all Parties.
9

10
11 (d) Hydraulic models for both powerhouses will remain
12 available through 1997 for bypass development studies requested
13 by the Fishery Agencies and Tribes and/or Chelan, unless the
14 Parties agree otherwise.
15
16

17
18
19 12. Initiation of Alternative Funding Program.
20

21 At any time after the effective date of this Agreement
22 pursuant to subsection A.7(a), the Fishery Agencies and Tribes,
23 by unanimous agreement among themselves, may initiate the Account
24 identified in Section C as an alternate means of funding the
25 Bypass Development Program by giving written notice to Chelan of
26 said election; provided, if notice of Account initiation is given
27 at any time prior to September 1 of any year, the Account may be
28 used during that year for spill only and the total Account credit
29 available for that year shall be reduced by the amount of money
30 spent or contractually committed by Chelan prior to such notice.
31 Notice of Account election may be given at any time prior to
32 October 1 of any year for establishment of the Account on
33 January 1 of the following year and when thus established the
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1 Account may be used for any purpose allowed under this Agree-
2 ment. Following receipt of notice, but prior to actual estab-
3 lishment of the Account, Chelan will use its best efforts to
4 facilitate preparation for any studies or other activities
5 contemplated by the Fishery Agencies and Tribes for performance
6 during the following year. Upon establishment of the Account,
7 Chelan will discontinue its direct funding of Bypass Development
8 Program work being performed at both powerhouses pursuant to
9 subsections B.1 through B.4. All further Bypass Development
10 Program funding shall thereafter be pursuant to the conditions
11 specified in Section C.
12

13 C. FISHERIES CONSERVATION ACCOUNT

14 1. Establishment of Account.

15 (a) A Fisheries Conservation Account (the "Account")
16 will be established by Chelan upon the occurrence of either of
17 the following events:
18

19 (1) The Fishery Agencies and Tribes elect
20 alternate funding of the Bypass Development Program through the
21 Account pursuant to subsection B.12 or
22

23 (2) A Bypass System is installed at one
24 powerhouse but not at the other.
25

26 (b) Upon establishment of the Account, Chelan's obliga-
27 tions for direct funding of the Bypass Development Program under
28 subsections B.1 through B.4 will be replaced with the alternate
29

1 funding method specified in this Section C and all further
2 development and testing, if any, shall be funded only from the
3 Account pursuant to subsection C.3.
4
5

6
7 2. Calculation of Annual Credit.
8

9 Subject to the provisions in subsection B.12 concerning
10 the first year of the Account, the Account shall be credited
11 annually on January 1st, subject to the carryover and deficit
12 limitations in subsection C.5, with an amount determined as
13 follows:
14
15
16
17

18 (a) If the Fishery Agencies and Tribes elect alternate
19 funding of the Bypass Development Program pursuant to subsec-
20 tion B.12, the annual Account credit shall be \$2,050,000.
21
22

23 (b) If a Bypass System is installed at Powerhouse No. 1
24 only, the annual Account credit shall be \$1,000,000.
25
26

27 (c) If a Bypass System is installed at Powerhouse No. 2
28 only, the annual Account credit shall be \$600,000.
29
30

31 3. Use of Account.
32

33 The Account may be used by the Fishery Agencies and
34 Tribes for the purchase of Phase II spill, as specified in sub-
35 section C.4 below, and for juvenile bypass studies, including
36 manufacture, installation and testing of prototypes, of the
37 Fishery Agencies' and Tribes' joint choice at the Rock Island
38 Project. Chelan shall establish and maintain control over the
39 Account in accordance with applicable provisions of Washington
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1 State law. Any expenditure of funds or credit from the Account
2 shall be made only upon joint written request of all Fishery
3 Agencies and Tribes.
4

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7 4. Purchase of Spill.
8

9 So long as credit is available in the Account for pur-
10 chase of spill, Phase II spring and summer spill will be provided
11 by Chelan on a daily basis at the Fishery Agencies' and Tribes'
12 joint request. The cost of lost energy resulting from spill
13 shall be calculated at the lowest available rate and debited
14 against the Account. The Fishery Agencies and Tribes will be
15 free to review Chelan's accounting of the cost of spill at any
16 time following reasonable notice.
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25 5. Bypass Construction After Establishment of Account.
26

27 (a) At any time after the Account is established, the
28 Fishery Agencies and Tribes, by unanimous agreement among them-
29 selves, may require Chelan to pay for and install a Bypass System
30 at either powerhouse where a Bypass System has not yet been in-
31 stalled if the criteria specified in subsections B.5 and B.7 are
32 met.
33
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38 (b) The materials procurement and construction sched-
39 ule, including phasing of work, for any Bypass System installed
40 pursuant to this subsection C.5, shall be established by the
41 Fishery Agencies and Tribes following consultation with Chelan;
42 provided, that the final cost estimate for installation pursuant
43
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1 to such schedule shall not exceed the applicable cost limitation
2 specified in subsection B.7. All other aspects of such installa-
3 tion, such as bid preparation and award, on-site inspection and
4 general contract administration, shall be performed by Chelan in
5 accordance with applicable laws and policies governing construc-
6 tion of public works. Chelan agrees to facilitate the construc-
7 tion schedule specified by the Fishery Agencies and Tribes,
8 including use of operating flexibility available at the Rock
9 Island Project and/or through the Mid-Columbia Hourly Coordina-
10 tion Contract; provided, Chelan shall comply with applicable
11 project safety criteria and, unless mutually agreed to by the
12 Parties, shall not be obligated to spill water for the purpose of
13 meeting such schedule.
14

15 (c) In the event the annual Account credit is
16 \$2,050,000 at the time of the notice under this subsection C.5 to
17 install a Bypass System at Powerhouse No. 1, the annual Account
18 credit shall thereafter be reduced to \$1,000,000; provided, that
19 the reduction shall be made gradually, as funds are actually
20 expended by Chelan for said installation, at the rate of 17.0476
21 to 1 in the event all ten (10) units are installed or at the rate
22 of 11.714 to 1 in the event only six (6) units are installed.
23 For example, using the ten (10) unit installation rate, for every
24 \$17.0476 spent on installation the annual Account credit would be
25 reduced \$1.00.
26

1 (d) In the event the annual Account credit is
2
3 \$2,050,000 at the time of the notice under this subsection to
4
5 install a Bypass System at Powerhouse No. 2, the annual Account
6
7 credit shall thereafter be reduced to \$600,000; provided, that
8
9 the reduction shall be made gradually, as funds are actually
10
11 expended by Chelan for said installation, at the rate of 5.31
12
13 to 1.

14
15 (e) In the event the annual Account credit is \$600,000
16
17 at the time of the notice under this subsection C.5 to install a
18
19 Bypass System at Powerhouse No. 1, the annual Account credit
20
21 shall be reduced to zero; provided, that the reduction shall be
22
23 made gradually, as funds are actually expended by Chelan for said
24
25 installation, at the rate of 29.833 to 1 in the event all ten
26
27 (10) units are installed, or at the rate of 20.5 to 1 if only six
28
29 (6) units are installed.

30
31 (f) In the event the annual Account credit is
32
33 \$1,000,000 at the time of the notice under this subsection C.5 to
34
35 install a Bypass System at Powerhouse No. 2, the annual Account
36
37 credit shall be reduced to zero; provided, that the reduction
38
39 shall be made gradually, as funds are actually expended by Chelan
40
41 for said installation, at the rate of 7.7 to 1.

42
43 (g) The gradual Account credit reductions referred to
44
45 in subsections (c) through (f) above shall be calculated by
46
47 Chelan as of the 1st day of each month following the decision to

1 install a Bypass System pursuant to this subsection C.5 until the
2 installation is complete, at which time the annual Account credit
3 shall be reduced to the amount specified in the applicable sub-
4 section above regardless whether the entire subsection B.7 capi-
5 tal allowance is consumed, subject to subsection B.9. The maxi-
6 mum annual Account credit during the period of gradual reductions
7 shall be determined by the following formula:

$$\frac{\text{The sum of the calculated monthly Account credit amounts for the entire year}}{12}$$

18 By way of example of application of the reduction rate and the
19 above formula, the following hypothetical table is based on
20 installation at Powerhouse No. 1 on ten (10) units pursuant to
21 subsection C.5(c) (17.0476 to 1 rate):

Month	<u>\$ Expended</u>	<u>Reduction</u>	<u>Annual Credit Amount</u>
January	\$ 0	\$ 0	\$2,050,000
February	0	0	2,050,000
March	0	0	2,050,000
April	0	0	2,050,000
May	0	0	2,050,000
June	0	0	2,050,000
July	0	0	2,050,000
August	1,000,000	58,659	1,991,341
September	1,000,000	58,659	1,932,682
October	1,000,000	58,659	1,874,023
November	1,000,000	58,659	1,815,364
December	1,000,000	58,659	1,756,705

22 To apply the formula to this example, total the Annual Credit
23 Amount column and divide that total by 12 for a maximum annual
24 Account credit for that year of \$1,976,676. If the installation

1 expenditures during the year result in a maximum annual Account
2 credit for that year that is less than the Account credit already
3 expended by the Fishery Agencies and Tribes for that year, the
4 deficit shall be deducted from the beginning Account balance for
5 the next year. Using the above example, if \$2,000,000 had been
6 expended for spill and studies that year the January 1st Account
7 credit for the next year would be reduced by \$23,324 to cover the
8 deficit.

16
17 6. Account Carryover and Deficit.
18

19 Unused Account credit up to one-half (1/2) the amount
20 allocated for any year may, at the option of the Fishery Agencies
21 and Tribes, be carried over to the following year. By mutual
22 agreement of all Parties the Account may also accumulate a defi-
23 cit of up to one-half (1/2) the annual Account credit for the
24 year in which the deficit is incurred. Under no circumstances
25 shall the Account balance during any year exceed one and one-half
26 (1-1/2) times the annual Account allocation for such year.

31
32
33 D. SPILL PROGRAM
34

35
36
37 1. Annual Spill Plan.
38

39 An Annual Spill Plan shall be developed jointly by
40 Chelan and the Fishery Agencies and Tribes by March 1 of each
41 year for all Phase I spill. The criteria for beginning and end
42 of the annual program and the daily duration shall be developed
43 as part of the annual plan. Modifications of the Annual Spill
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47

1 Plan after March 1 of each year shall be made only by consensus
2 of all Parties. For purposes of Phase I spill, decisions on
3 meeting plan criteria to start spill, to implement the annual
4 plan, and to address circumstances that arise during the spill
5 season shall be made by three (3) designated representatives for
6 the Fishery Agencies, the Tribes, and Chelan and Puget, respec-
7 tively. Decisions of the designated representatives, except for
8 the decision to stop spill, shall be made by majority vote. The
9 decision to stop spill shall be made by Chelan in consultation
10 with the Fishery Agencies and Tribes and shall be in accordance
11 with the criteria in the Annual Spill Plan.
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23 2. Phase I Spill.
24

25 (a) Chelan will implement a controlled spill program
26 using 10% of the daily average flow through Powerhouse No. 2 and
27 50% of the daily average flow through Powerhouse No. 1; provided,
28 that a minimum spill level of 20% of the total project flow shall
29 be provided until the central hatchery and satellite facilities
30 referred to in Section E are developed and capable of making the
31 first release of 250,000 lbs. of yearling juveniles; thereafter
32 the 20% minimum spill requirement shall no longer apply. These
33 flow percentages will be established assuming powerhouse flow
34 conditions which would occur in the absence of spill for fish
35 passage. This 10%/50% program shall extend over 80% of the
36 spring migration. The criteria to determine the duration of the
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1 spill program necessary to encompass 80% of the spring migration
2 will be set forth in the Annual Spill Plan.
3

4
5 (b) In 1987 Chelan will conduct a summer spill evalua-
6 tion using up to one million acre feet of water. More or less
7 water may be used if required by the study design and mutually
8 agreed to by the Parties to this Agreement. The evaluation will
9 be conducted during the June-July period of the summer migration
10 utilizing a study plan approved by all Parties to this Agree-
11 ment. The study may be repeated the following year if mutually
12 agreed to by all Parties. If the summer spill study shows that
13 summer spill is at least 75% as effective as that shown during
14 the 1984 spring spill study, Chelan will implement an annual
15 summer spill program for fish passage using 500,000 acre feet of
16 water. Whether the 75% threshold for summer spill under this
17 Agreement has been reached will be determined as follows:
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31 (1) consult the 1984 Rock Island Spring Spill Study results pre-
32 pared by BioSonics which lists in Table 2 at page 12 the daily
33 percentage of instantaneous fish passage and the instantaneous
34 percentage of water spilled, (2) calculate an index by dividing
35 the daily instantaneous fish passage percentage by the daily
36 instantaneous spill percentage for each of the twenty-five (25)
37 days of spill specified on the above-referenced table and then
38 calculate the average of those quotients (which index is 1.26),
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46
47 (3) calculate an index number for the 1987 summer spill study

1 using the same methodology, and (4) if the 1987 index number is
2 at least 75% of the 1984 index of 1.26 (i.e., equal to or greater
3 than 0.95), then Chelan will implement a summer spill program.
4
5

6 (c) If a summer spill program is implemented, at least
7
8 80% of the 500,000 acre feet of water allocated for summer spill
9 must be spilled during the months of June and July. Up to 20% of
10 the 500,000 acre feet allotted may be spilled during the first
11 fifteen (15) days of August, subject to both of the following
12 limitations:
13
14
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17

18 (1) Sufficient replacement energy must be
19 available for purchase by Chelan to satisfy
20 Chelan's and Puget's respective firm loads,
21 including firm transfers, as identified in the
22 Pacific Northwest Coordination Agreement Data and
23 Operating Program, during the actual time of spill
24 and
25
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32 (2) The total cost of replacement energy re-
33 quired by spill during the first fifteen (15) days
34 of August cannot exceed an amount equal to the
35 total calculated cost of 6,666.67 acre feet per day
36 if spilled at the cost of energy during the last
37 fifteen (15) days of July. The cost of spill dur-
38 ing July and August shall be at the lowest availa-
39 ble replacement rate.
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1 (d) If the juvenile Bypass Development Program does not
2 proceed on schedule (e.g., studies take longer than expected or
3 technical difficulties are experienced) and the Account has not
4 yet been established, the Fishery Agencies and Tribes may elect
5 to continue the 10%/50% spill program identified in subsec-
6 tion D.2(a) and the summer spill program identified in subsec-
7 tions D.2(b) and (c), if implemented.
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9

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15 3. Phase II Spill.
16

17 In the event the Account is established as provided in
18 this Agreement, the Phase I spill program set forth in this Sec-
19 tion D shall immediately terminate and all spill thereafter, if
20 any, shall be pursuant to subsection C.4.
21
22

23
24
25 E. HATCHERY-BASED COMPENSATION
26

27 1. Program Obligation.
28

29 Chelan agrees to construct, maintain and fund the opera-
30 tion and maintenance of a hatchery-based compensation program for
31 the Rock Island Project sufficient to meet the production objec-
32 tive set out in subsection E.3, consistent with the schedule set
33 out in subsection E.2 and as otherwise described below. Chelan
34 agrees to provide a new central hatchery facility, satellite
35 facilities and support facilities necessary to implement the
36 compensation program set out herein. In connection with the
37 construction of the central and satellite facilities, the Parties
38 shall mutually agree on the preliminary and final designs and
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47

1 engineering and on acceptance of the completed construction with
2 regard to compliance with specifications. This compensation
3 program will proceed in two phases.
4
5

6
7 2. Phase I Hatchery Compensation Schedule.
8

9 The hatchery program described in subsection E.1 shall
10 proceed on the following schedule:
11

12 (a) in 1987:
13

14 (1) Chelan and the Fishery Agencies and Tribes
15 will jointly select a site for the central hatchery
16 facility.
17

18 (2) The Fishery Agencies and Tribes will jointly
19 develop a production plan, following consultation
20 with Chelan, which shall describe the rearing and
21 release program, including anticipated use of
22 satellite facilities and production evaluations,
23 such as coded wire tag mark/recovery studies. The
24 implementation of the production plan shall be
25 funded by Chelan.
26

27 (3) Chelan, in consultation with the Fishery
28 Agencies and Tribes, shall fund genetic and
29 microhabitat studies. The results of the ongoing
30 studies to identify distinct genetic stocks of
31 anadromous salmonids above Rock Island Dam will be
32 used to supplement existing information and guide
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1 the final selection of the number and location of
2 adult traps and satellite facilities.

3
4
5 (b) in 1988-89:

6 (1) Chelan will construct the central hatchery
7 facility.

8 (2) The Fishery Agencies and Tribes will jointly
9 make adjustments to the production plan with
10 respect to the use of satellite facilities and will
11 plan implementation.

12 (3) Chelan shall construct needed satellite
13 facilities to implement the plan, subject to the
14 limitations set out in subsections E.3 and E.5
15 below.

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27 3. Phase I Facility Capacity Requirements.

28 (a) Phase I hatchery compensation facilities, including
29 satellite facilities, will be capable of rearing and releasing
30 250,000 pounds of salmon at 10/lb. (approximately 2,500,000 year-
31 lings) and 30,000 pounds of steelhead at 6.5/lb. (approximately
32 200,000 yearlings). The Phase I hatchery program will be carried
33 out in a manner that is consistent with the maintenance of
34 genetically distinct stocks in the mid-Columbia River system
35 above Rock Island Dam. To that end, the design will incorporate
36 the capability for incubating, rearing, adult trapping and hold-
37 ing for up to five (5) discrete stocks of salmon and steelhead.
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1 The Parties agree that Chelan's obligation under Phase I
2
3 will be fulfilled by providing the additional production capaci-
4
5 ty, the necessary support facilities and funding for studies
6
7 appropriate to carry out the program, as well as the funding for
8
9 the production of 250,000 pounds of salmon and 30,000 pounds of
10
11 steelhead, as set out in this subsection E.3(a). Chelan is not
12
13 obligated to provide a specific level of fish production on an
14
15 annual basis.

16
17 (b) Satellite facilities for short-term rearing and
18
19 release of juveniles will be constructed to meet the rearing and
20
21 release requirements provided in the production plan referred to
22
23 in subsection E.2. Adult trapping may be accomplished at facili-
24
25 ties presently in existence or under construction, specifically
26
27 the Wells fishway trap and the adult traps being constructed at
28
29 the Dryden and Tumwater fishways on the Wenatchee River. Four
30
31 (4) short-term juvenile rearing and release facilities and one
32
33 (1) net pen station for the sockeye salmon pilot program are
34
35 currently contemplated to meet the production objective. Chelan
36
37 agrees to construct the satellite facilities specified in subsec-
38
39 tion E.5(b). In accordance with subsection E.2, the Fisheries
40
41 Agencies and Tribes may request additional satellite rearing and
42
43 release facilities be constructed to meet requirements of the
44
45 production plan. Chelan will only be obligated to construct
46
47 these additional satellite facilities if the total construction

1 costs of labor and materials for all satellite facilities, in-
2 cluding those specified in subsection E.5(b), does not exceed
3 \$450,000.
4
5

6
7 4. Evaluation Requirements.
8

9 Chelan shall fund, based on study designs mutually
10 agreed upon by the Parties:
11

12 (a) a pilot program to begin artificial production of
13 sockeye salmon. Any sockeye production program that results from
14 this pilot program will be included within the 250,000 pounds
15 specified in subsection E.3(a).
16
17

18 (b) a sampling program to determine hatchery v. natural
19 components of steelhead returns.
20
21

22 (c) an evaluation of hatchery production and its inter-
23 relationship with natural production to be used to assist in
24 adjusting the production program.
25
26

27 5. Construction Criteria.
28

29 (a) Chelan agrees to construct a central hatchery
30 facility as described below:
31

32 (1) A hatchery building that would include: cover-
33 ed vehicle storage, shop, laboratory, rest-
34 rooms, bunkroom and shower, incubation room
35 and an office.
36

37 (2) Forty (40) 10' x 100' x 4' outside raceways.
38

39 (3) Two (2) 50' x 220' x 6' earthen ponds.
40
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1 (4) Six (6) adult holding ponds.
2

3 (5) A pollution abatement system.
4

5 (6) 87 cfs of well water (77.7 cfs for salmon and
6 9.3 cfs for steelhead); comprised of 40 cfs of
7 water from the deep aquifer and 47 cfs of
8 water from the shallow aquifer at the Rocky
9 Reach east bank or, if 47 cfs of shallow
10 aquifer water is unavailable due to engineer-
11 ing infeasibility, 47 cfs of Columbia River
12 water.
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21 (7) All the necessary piping, alarm systems, fenc-
22 ing and miscellaneous equipment normally as-
23 sociated with a hatchery of this size.
24
25
26

27 (b) Chelan agrees to construct satellite facilities for
28 the stocks and production capacities on the tributaries specified
29 below, subject to the limitations contained in paragraph E.3(b),
30 unless the Fishery Agencies and Tribes jointly determine that
31 such facilities are unnecessary. The stocks and capacities (not
32 to exceed 250,000 lbs.) may be revised upon mutual agreement of
33 the Parties. These facilities shall be constructed on public
34 lands or other lands acquired through easements or agreements and
35 shall utilize existing canals or other suitable structures when
36 feasible and consistent with the production plan referred to in
37 subsection E.2.
38
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	<u>STOCK</u>	<u>TRIBUTARY</u>	<u>PRODUCTION CAPACITY</u>
1			
2			
3	Spring Chinook	Methow River System	28,800 pounds
4			
5	Spring Chinook	Wenatchee River System	67,200 pounds
6			
7	Summer Chinook	Okanogan River System	57,600 pounds
8			
9	Summer Chinook	Wenatchee River System	86,400 pounds
10			
11	Sockeye	Lake Wenatchee or	10,000 pounds
12		Osoyoos (Net pens)	
13			

14 (c) Chelan agrees to fund the annual maintenance and
 15 operation of all facilities identified in and necessary to imple-
 16 ment Section E.
 17

18
 19
 20 6. Rocky Reach Credit.
 21

22 If Chelan proceeds with a Phase I summer spill program
 23 following evaluation of spill effectiveness for passage of summer
 24 migrants, as provided in Section D, up to 35,000 pounds of the
 25 250,000 pounds of hatchery production described in this Section E
 26 may at Chelan's option be annually credited against mitigation
 27 production requirements for Rocky Reach, FERC Project No. 2145.
 28 This credit shall be exclusive of the 30,000 pounds of steelhead
 29 production capacity required by subsection E.3(a).
 30
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38 7. Phase II Hatchery Compensation.
 39

40 (a) A project mortality study will be conducted in
 41 (1) 1995 or (2) upon successful completion of juvenile Bypass
 42 Systems at both powerhouses or a juvenile bypass "program,"
 43 whichever event occurs earlier, for the purpose of determining
 44
 45
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 47

1 juvenile losses at the Rock Island Project. The losses so deter-
2 mined shall be used to adjust hatchery production levels based on
3 then-current run size determined at the project. The study de-
4 sign shall be developed jointly by the Parties. For the purpose
5 of this subsection E.7(a) a juvenile bypass "program" may be
6 defined as an installed Bypass System at one powerhouse and an
7 affirmative written election by the Fishery Agencies and Tribes
8 to rely until 1995 solely on spill purchased under Section C for
9 fish passage protection at the other powerhouse.

10
11 (b) An adult mortality study will be conducted during
12 the implementation of the Phase I hatchery production period
13 described in subsection E.2 for the purpose of determining the
14 adult losses at the Rock Island Project. The specific study plan
15 must be agreed upon by all the Parties, but in general terms the
16 Parties anticipate that losses of adult salmon and steelhead will
17 be measured by trapping and tagging fish with passive integrated
18 transponder tags, releasing one group above Rock Island Dam,
19 another below the dam, and comparing the ratio of the two groups
20 for fish passing Rocky Reach Dam and for fish entering the
21 Wenatchee River. The study will be designed to assure a suffi-
22 cient number of replicates for reliable results. The adult
23 losses so determined shall be converted to establish the required
24 juvenile hatchery production necessary to compensate for such
25 adult losses based on the latest available juvenile-to-adult

1 survival rates by species agreed upon by all Parties, and any
2 necessary adjustment in hatchery production will be made.

3
4
5 (c) The hatchery production level shall be adjusted, if
6 requested by the Fishery Agencies and Tribes, when the juvenile
7 run size increases to at least 110% of the run size used in the
8 initial Phase II adjustments based on a rolling five (5) year
9 average; provided, such adjustment shall not be made any earlier
10 than six (6) years after the Phase II adjustment specified in
11 subsection E.7(b) above. This adjustment is intended to account
12 for increased project-related losses associated with greater
13 numbers of fish passing the Rock Island Project and shall be
14 implemented in accordance with the production plan referred to in
15 subsection E.2. Chelan shall have a period of two (2) years to
16 construct sufficient facilities for the required production ad-
17 justment in subsections E.7(b) or E.7(c). Chelan shall conduct
18 an annual juvenile passage monitoring program jointly developed
19 by the Parties. The monitoring program shall be sufficient to
20 develop the data base necessary to compute the rolling five (5)
21 year average referred to in this subsection E.7(c).

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39 8. Hatchery Contracting Opportunities.

40 The Parties recognize that the Fishery Agencies and
41 Tribes have a particular interest in the development, implementa-
42 tion, monitoring and evaluation of the program under this Sec-
43 tion E. To that end the Parties agree:
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47

1 (a) Chelan shall give equal consideration to any
2
3 Fishery Agency or Tribe in the selection of contractors to per-
4
5 form biological studies under this Section F and
6

7 (b) Chelan shall utilize its best efforts to assure
8
9 that the Tribes are able to participate in the contracting oppor-
10
11 tunities that may become available under this Section E.
12

13 F. ADULT FISH LADDERS
14

15 1. Modification to Meet Operating Criteria.
16

17 (a) Chelan will modify the existing adult fish ladders
18
19 at Rock Island Dam so their operation meets current Fishery
20
21 Agency operating criteria. It is anticipated that this will
22
23 entail increasing the transportation velocities on the left bank
24
25 ladder and redistributing flows to the four (4) right bank ladder
26
27 entrances.
28

29 (b) Chelan shall conduct a comprehensive hydraulic
30
31 evaluation of the right bank ladder based on a mutually agreeable
32
33 study design. If the hydraulic evaluation shows a discrepancy
34
35 between the pumped water supply and the design flow at particular
36
37 tailwater elevations, Chelan will make up the difference using
38
39 the existing gravity water supply in order to meet design flows.
40

41 (c) The combined construction cost of modifications at
42
43 the left and right bank ladders (not including the costs of the
44
45 hydraulic evaluation and gravity water supply) shall not exceed
46
47 \$650,000.

1 G. ROCK ISLAND COORDINATING COMMITTEE

2
3 1. Establishment of Committee.

4
5 There shall be a Rock Island Coordinating Committee (the
6 "Committee") composed of one (1) technical representative of each
7
8 Party. The Committee shall meet whenever requested by any two
9
10 (2) Parties following a minimum of ten (10) days written notice
11
12 (unless waived), or pursuant to subsection A.6, and shall act
13
14 only by consensus of all Parties. Any Fishery Agency or Tribe
15
16 may, at any time, elect by written notice not to participate in
17
18 the Committee.
19

20
21 2. Use of Committee.

22
23 The Committee will be used as the primary means of con-
24
25 sultation and coordination between Chelan and the Fishery Agen-
26
27 cies and Tribes in connection with the conduct of studies and
28
29 implementation of the measures set forth in this Agreement and
30
31 for dispute resolution pursuant to subsection A.6. The U.S. Fish
32
33 and Wildlife Service may participate in meetings of the Committee
34
35 in order to consult and coordinate with the Committee on
36
37 anadromous fish issues of concern to the Service.
38

39 3. Studies and Reports.

40
41 All studies and reports prepared under this Agreement
42
43 will be available to all Parties as soon as reasonably possible.
44
45 Draft reports will be circulated through the Committee
46
47

1 representatives for comment, and comments will either be address-
2 ed in order or made an appendix to the final report.
3
4

5 H. FISHERY AGENCIES' AND TRIBES' RESPONSIBILITIES
6

7 1. Limitation of Mid-Columbia Proceeding.
8

9 The Fishery Agencies and Tribes agree to join with
10 Chelan to request that the FERC terminate the Mid-Columbia pro-
11 ceeding insofar as it pertains to the Rock Island Project.
12
13

14 2. Support for Relicense.
15

16 The Fishery Agencies and Tribes agree to support the
17 expeditious issuance of a new license to Chelan for the Rock
18 Island Project for a term of forty (40) years, incorporating the
19 conditions of this Agreement as an article of the new license.
20 This support shall include reasonable efforts to expedite the EIS
21 process. The Parties shall file comments on the draft EIS that
22 will address the history of project impacts as presented in the
23 Mid-Columbia proceeding to the extent such impacts are not ad-
24 dressed in the draft EIS or are addressed incorrectly by the
25 draft, and supporting the mitigation measures defined by this
26 Agreement as both the proposed action and the preferred alterna-
27 tive. The Parties shall exchange drafts of such comments prior
28 to submission to the FERC and engage in consultation at the re-
29 quest of any Party to ensure that the comments are consistent
30 with this Agreement.
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1 3. Stipulation of Adequacy.

2
3 The Fishery Agencies and Tribes stipulate that the per-
4
5 formance of Chelan's responsibilities under this Agreement con-
6
7 stitutes adequate fish protection and full compensation for all
8
9 losses caused by the Rock Island Project at least until expira-
10
11 tion of the Initial Period. It is further stipulated that this
12
13 Agreement satisfies any obligations of any Party arising under
14
15 applicable laws and regulations, including but not limited to the
16
17 Federal Power Act, the Pacific Northwest Electric Power Planning
18
19 and Conservation Act, and the Electric Consumers Protection Act
20
21 of 1986, at least until expiration of the Initial Period.

22
23 4. Fish and Wildlife Program.

24
25 The Fishery Agencies and Tribes stipulate that the per-
26
27 formance of Chelan's responsibilities under this Agreement shall
28
29 constitute full compliance with the applicable provisions of the
30
31 Northwest Power Planning Council's 1984 Fish and Wildlife Pro-
32
33 gram, at least until expiration of the Initial Period. The
34
35 Fishery Agencies and Tribes stipulate that Chelan shall receive
36
37 full credit for its hatchery production in meeting any require-
38
39 ments that may be established as a result of implementation of
40
41 Section 201 of the Council's Program.

42
43 5. Limitation on Reopening.

44
45 The Fishery Agencies and Tribes shall not invoke or rely
46
47 upon any reopener clause set forth in any license applicable to

1 the Rock Island Project for the purpose of obtaining additional
2 fish measures or changes in project structures or operations
3 pertaining to fishery issues until the expiration of the Initial
4 Period.
5
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8
9 6. Additional Measures.
10

11 The Fishery Agencies and Tribes shall refrain from con-
12 tending on their own behalf or supporting any contention by other
13 persons in any proceeding or forum that additional fish measures
14 or changes in project structures or operations pertaining to
15 fishery issues are required at the Rock Island Project until
16 expiration of the Initial Period.
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23 7. Release and Waiver of Claims.
24

25 The Fishery Agencies and Tribes, on their own behalf,
26 and on behalf of their successors and assigns, hereby release,
27 waive and discharge Chelan and Chelan's successors, predecessors,
28 commissioners, agents, representatives, employees, power pur-
29 chasers and contractors, for the period from March 7, 1979
30 through the Initial Period of this Agreement from any and all
31 claims, demands, obligations, promises, liabilities, actions and
32 causes of action of any kind ("claims") concerning anadromous
33 fish measures and damages related to those measures at the Rock
34 Island Project.
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45 This Agreement shall constitute a full and final settle-
46 ment, compromise, accord and satisfaction, discharge and release
47

1 of all such claims for a period from March 7, 1979 through the
2 Initial Period. The Tribes further agree that this Agreement
3 shall bind the Tribes, all successors and assigns of the Tribes,
4 and the United States in its capacity as trustee for the Tribes,
5 to the extent that any such person or entity asserts any feder-
6 ally protected tribal or communal rights related to anadromous
7 fish measures and damages related to those measures at the Rock
8 Island Project for a period from March 7, 1979 through the
9 Initial Period.
10

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19 8. Judicial Review.
20

21 The Fishery Agencies and Tribes shall refrain from seek-
22 ing judicial review of the FERC orders approving this Agreement
23 and issuing a new license that includes this Agreement as a con-
24 dition of such license.
25
26
27

28
29 9. Cooperation in Studies.
30

31 The Fishery Agencies and Tribes shall cooperate with
32 Chelan in conducting studies and shall provide assistance in
33 obtaining any approvals or permits which may be required for
34 implementation of this Agreement.
35
36
37

38
39 I. REGULATORY APPROVAL
40

41 1. FERC Orders.
42

43 All Parties agree to join in the filing of an offer of
44 settlement with the FERC based on this Agreement and to request
45 that the FERC issue appropriate orders approving the settlement
46
47

1 (including an interim order pursuant to subsection A.7(c)),
2
3 relicensing the Rock Island Project to Chelan, including this
4
5 Agreement as a condition of such license, and removing the Rock
6
7 Island Project from the Mid-Columbia proceeding.
8

9 2. Performance Contingent on Approval.

10
11 Performance of all Parties' obligations under this
12
13 Agreement is expressly made contingent on obtaining all necessary
14
15 regulatory approvals, specifically including all FERC orders
16
17 referred to in subsection I.1 above, and all applicable federal,
18
19 state and local permits. It is expressly agreed by all Parties
20
21 that this Agreement shall be submitted to the FERC as a unit and
22
23 any material modification of its terms, approval of less than the
24
25 entire Agreement, or addition of material terms by the FERC shall
26
27 make this Agreement voidable at the option of any Party.
28

29 3. No Prejudice.

30
31 All Parties stipulate that neither FERC approval nor any
32
33 Party's execution of this Agreement shall constitute approval or
34
35 admission of, or precedent regarding, any principle, fact or
36
37 issue in the relicensing and Mid-Columbia proceedings, or any
38
39 other FERC proceeding, including subsequent modification proceed-
40
41 ings under Section A.
42
43
44
45
46
47

1 J. MISCELLANEOUS

2
3 1. Notices.

4
5 All written notices to be given pursuant to this Agree-
6 ment shall be mailed by first-class mail, postage prepaid, to
7
8 each Party at the address listed below or such subsequent address
9 as a Party shall identify by written notice to all other Par-
10 ties. Notice shall be deemed to be given three (3) days after
11 the date of mailing.
12
13
14
15

16
17 2. Waiver of Default.

18
19 Any waiver at any time by any Party hereto of any right
20 with respect to any other Party or with respect to any matter
21 arising in connection with this Agreement shall not be considered
22 a waiver with respect to any subsequent default or matter.
23
24
25

26
27 3. Entire Agreement--Modifications.

28
29 All previous communications between the Parties hereto,
30 either verbal or written, with reference to the subject matter of
31 this Agreement are hereby abrogated, and this Agreement duly
32 accepted and approved, constitutes the entire agreement between
33 the Parties hereto, and no modifications of this Agreement shall
34 be binding upon any Party unless executed or approved in accor-
35 dance with the procedures set forth in Section A.
36
37
38
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41

42
43 4. Benefit and Assignment.

44
45 This Agreement shall be binding upon and inure to the
46 benefit of the Parties hereto and their successors and assigns;
47

1 provided, no interest, right or obligation under this Agreement
2
3 shall be transferred or assigned by any Party hereto to any other
4
5 Party or to any third party without the written consent of all
6
7 other Parties.
8

9 5. Inflation Calculations.

10 All dollars specified in this Agreement are 1986
11
12 dollars. The estimated costs of construction activities will be
13
14 adjusted annually for each year after 1986 based on the "City
15
16 Cost Indexes" as printed in the "Engineering News Record." All
17
18 other dollar figures in this Agreement shall be adjusted annually
19
20 for each year after 1986 based on the "Consumer Price Index for
21
22 All Urban Consumers" published by the Bureau of Labor Statistics
23
24 of the United States Department of Labor. If either of these
25
26 indexes is discontinued or becomes unavailable, a comparable
27
28 index which is agreeable to all Parties will be substituted.
29

30
31 6. Force Majeure.
32

33 Chelan shall not be liable for failure to perform or for
34
35 delay in performance due to any cause beyond its reasonable con-
36
37 trol. This may include, but is not limited to, fire, flood,
38
39 strike or other labor disruption, act of God, act of any govern-
40
41 mental authority or of the Fishery Agencies or Tribes, riot,
42
43 embargo, fuel or energy unavailability, wrecks or unavoidable
44
45 delays in transportation, and inability to obtain necessary
46
47 labor, materials or manufacturing facilities from generally

1 recognized sources in the applicable industry. Chelan will make
2 all reasonable efforts to resume performance promptly once the
3 force majeure is eliminated.
4
5

6
7 7. Execution.
8

9 This Agreement may be executed in counterparts. A copy
10 with all original executed signature pages affixed shall consti-
11 tute the original agreement. The date of execution shall be the
12 date of the final Party's signature. Approval of this Agreement
13 must be acknowledged by the Commissioner of Indian Affairs and
14 the Secretary of the Interior, or their delegates, to the extent
15 required by 25 U.S.C. § 81.
16
17

18
19 8. Authority.
20

21 Each Party to this Agreement hereby represents and
22 acknowledges that it has full legal authority to execute this
23 Agreement and shall be fully bound by the terms hereof.
24
25

26
27 9. Action for Noncompliance.
28


29 Notwithstanding any other provision of this Agreement,
30 during the Initial Period any Party may seek relief arising sole-
31 ly from noncompliance with this Agreement by any Party; provided,
32 all requests during the Initial Period for specific performance
33 of any provision of this Agreement shall be filed with the FERC
34 pursuant to subsection A.6.
35
36

37
38 IN WITNESS WHEREOF, the Parties have executed this
39 Agreement the day and year first written above.
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Dated April 9, 1987, 1987

PUBLIC UTILITY DISTRICT NO. 1 OF
CHELAN COUNTY

By 
Typed Name Gerald L. Copp
Title General Manager

Address for Notice:

Public Utility District No. 1 of
Chelan County, Washington
327 N. Wenatchee Avenue
P.O. Box 1231
Wenatchee, WA 98801

1
2
3
4 Dated April 24, 1987
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6
7

8 PUGET SOUND POWER & LIGHT COMPANY
9

10
11
12 By 

13 Typed Name R. G. Bailey

14 Title Vice President Power Systems
15
16
17

18 Address for Notice:
19

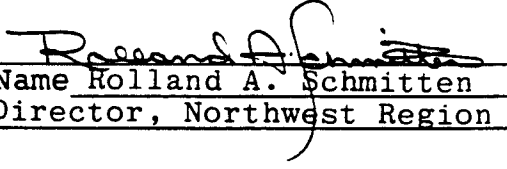
20
21 Puget Sound Power & Light Company

22 Puget Power Building

23 Bellevue, Washington 98009-9981
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4 Dated April 20, 1987
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7

8 NATIONAL MARINE FISHERIES SERVICE,
9 in its own capacity and as
10 delegate for the United States
11 Dept. of Commerce
12
13

14
15 By 
16 Typed Name Rolland A. Schmitt
17 Title Director, Northwest Region
18
19
20

21 Address for Notice:
22
23


24 F. Lorraine Bodi
25 NOAA, Office of General Counsel (GCNW).
26 7600 Sand Point Way N.E., BIN C15700
27 Seattle, WA 98115
28

29 AND
30

31 Dale R. Evans, Director
32 Environmental & Technical Services Division
33 National Marine Fishery Service
34 847 NE 19th Avenue, Suite 350
35 Portland, OR 97232-2279
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4 Dated February 18, 1987
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7

8 STATE OF WASHINGTON, acting by and
9 through the Washington Dept. of
10 Fisheries
11

12
13
14 By 
15 Typed Name Joseph R. Blum
16 Title Director of Fisheries
17

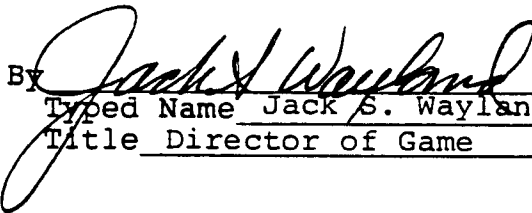
18
19
20 Address for Notice:
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22
23 Department of Fisheries
24 115 General Admin. Bldg., AX-11
25 Olympia, WA 98504
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4 Dated February 18, 1987
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6

8 STATE OF WASHINGTON, acting by and
9 through the Washington Department
10 of Game
11

12
13
14 By


15 
16 Typed Name Jack S. Wayland
17 Title Director of Game
18
19

20 Address for Notice:
21
22

23 Department of Game
24 600 N. Capitol Way, GJ-11
25 Olympia, WA 98504
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4 Dated February 27, 1987
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7

8 STATE OF OREGON, acting by and
9 through the Oregon Dept. of
10 Fish and Wildlife
11


12
13
14 By 
15 Typed Name Randy Fisher
16 Title Director
17
18

19
20 Address for Notice:
21
22

23 Frank Young
24 Oregon Department of Fish and Wildlife
25 P.O. Box 59
26 Portland, Oregon 97207
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4 Dated 4-24-87, 1987
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7

8 CONFEDERATED TRIBES AND BANDS OF
9 THE YAKIMA INDIAN NATION
10

11
12
13 X By 
14 Typed Name Melvin R. Sampson
15 Title Chairman, Yakima Tribal Council
16
17

18
19 Address for Notice:
20
21

22 TIM WEAVER
23 P.O. Box 487
24 YAKIMA, WASHINGTON 98907
25
26

27 DUPLICATE NOTICE:
28

29 MR. CARROLL PALMER
30 DIRECTOR, DEPT. OF NATURAL RESOURCES
31 YAKIMA INDIAN NATION
32 P.O. Box 151
33
34 TOPPENISH, WASHINGTON 98948
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4 Dated: 4/24, 1987
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6
7 CONFEDERATED TRIBES OF THE COLVILLE RESERVATION

8
9 By: Melton
10

11 Its: Chairperson

12 Address: Colville Confederated Tribes
13 P.O. Box 150
14 Nespelem, WA 99155
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COLVILLE CONFEDERATED TRIBES
RESERVATION ATTORNEY OFFICE
P.O. Box 150
Nespelem, WA 99155
(509) 634-4711

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4 Dated 4-17-87, 1987
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7

8 CONFEDERATED TRIBES OF THE UMATILLA
9 INDIAN RESERVATION
10

11
12 By Elwood H. Patawa
13
14 Typed Name Elwood H. Patawa
15 Title Chairman, Board of Trustees
16
17

18
19 Address for Notice:
20
21

22 Confederated Tribes of the
23 Umatilla Indian Reservation
24 Post Office Box 638
25 Pendleton, Oregon 97801
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4 Dated April 14, 1987
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7

8 NATIONAL WILDLIFE FEDERATION
9

10
11
12 By Terence L. Thatcher
13 Typed Name Terence L. Thatcher
14 Title Counsel
15
16
17

18 Address for Notice:
19
20

21 National Wildlife Federation
22 Suite 606, Dekum Building
23 519 S.W. Third Avenue
24 Portland, OR 97204
25
26
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